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ABSTRACT

One hundred and forty nine abstracts of articles appearing in periodicals and newspapers make up this quarterly publications on education in India. Many topics are covered, some of which are: adult education, finance, guidance and counselling, moral education, physical education, and history. A second longer section is on technical education. The document is alphabetically arranged first by subject then by author. Some related documents are: ED 041 683, ED 043 437, ED 049 989, ED 067 334, and SO 005 474. (OPH)

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(Abstract Nos. 168 - 317)

Contains a Special Section

TECHNICAL EDUCATION - II

(Abstract Nos. A27 - A59)

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CONTENTS

Academic Achievement	168-76
Administration and Organization	177-94
Adult Education	195-8
Courses of Study	199
Curriculum	200-8
Economics of Education	209-10
Education : General	211-19
Educational Psychology	220-46
Educational Research	247
Educational Sociology	248
Examination and Evaluation	249-52
Extra-Curricular Activities	253
Finance	254
Forms of Education	255-7
Guidance and Counselling	258-9
Health Care	260
Higher Education	261-3
Higher Technical and Vocational Education	264-5
History	266
Instructional Material and Aids	267-70
Moral Education	271
Physical Education	272-3
Policy and Planning	274-7
Pre-Primary Education	278
Primary Education	279-81
Reading	282
School Forms	283-5
Secondary Education	286
Social Education	287
Student Indiscipline	288
Student Problems	289-90
Teacher Education	291-301
Teachers	302-4
Teaching Methods	305-9
Tests and Measurements	310-15
Women's Education	316
Workers' Education	317

Special Section:

Technical Education - II	A27-A59

INDIAN EDUCATIONAL MATERIAL

Vol 7 No 2 June 1972

ACADEMIC ACHIEVEMENT

168 AGYA JIT SINGH: Academic achievement and body measurement - a study of correlates. Journal of Educational Research and Extension 1972, 8(3), 166-70. 14 ref.

The purpose of the study is to determine the degree of relationship between the physical measurements and academic achievement. Information about the percentage of marks in matriculation examination, percentage of marks in B.A./B.Sc. degree examination and physical measurements such as weight, height, and measures of chest was collected from 200 male students (age range 20-28 years) studying in postgraduate classes. Intercorrelations between the variables were computed. The findings are as follows: 1) there is no relationship between academic achievement and body measures; 2) correlation exists between the body measurements themselves; and 3) a positive correlation exists between the marks of matriculation and B.A.

169 DEB M: Interest pattern of high achievers in natural science course. Indian Journal of Psychology 1967, 42(1-4), 97-100.

The sample for the study consisted of 395 students who passed the higher secondary examination of the Board of Secondary Education, West Bengal with physics, chemistry and mathematics. The Strong's Vocational Interest Blank was modified by the author in 1962, and the same modified form was administered to the students for analysing their interest pattern. The high achievers were found to be interested in occupations and activities that require scientific knowledge and some proficiency in mechanical manipulation. They also seemed to be extroverts and independent.

170 DEO P, GUPTA A K: Comparison of the criteria for identifying over- and under-achievers. Indian Educational Review 1972, 7(1), 153-67. 15 ref.

Fifty nine students of VIII class, of whom 17 were girls, were chosen for the study. The aggregate of marks obtained by them in three previous examinations in academic subjects was taken as achievement scores. Intelligence test standardised by Prayag Mehta was administered for verbal intelligence scores. Raven's Standard Progressive Matrices test was used to obtain non-verbal intelligence scores. The various statistical and other methods used to identify the over-, average and under-achievers were: i) T-score ratio, ii) regression equation, iii) stanine difference, iv) percentiles, v) teachers' ratings, vi) identification by teachers. The results obtained were in terms of frequencies falling into the three categories by each method separately for verbal and nonverbal intelligence scores. The data were analysed and the following conclusions arrived at: 1) the different criteria using the same measures of achievement and intelligence do not show a very high correspondence for classification of students into the three categories; 2) different classifications may be obtained for the same subjects if non-verbal intelligence scores are used as the basis instead of verbal ones; 3) teachers' ratings or identification by teachers correspond well with each other but lack the support of statistical methods; teachers' methods may be supplemented by other methods to make them more valid and accurate.

171 HUNDAL P S, JERATH J M: Correlates of projective measure of achievement motivation and their factorial structure. Indian Journal of Psychology 1972, 47(1), 15-27. 42 ref.

The study was undertaken to investigate the structural relationship of n-Ach with personality factors, dominant interests, intelligence, and academic success. Besides, the structural relationship of academic achievement with intelligence and personality, the structures of second order personality factors and their relationship with dominant interests were also studied. Two hundred and two postgraduate students were administered 1) adapted version of McClelland's Thematic Apperception Test of n-Ach (SIET Institute, 1964), 2) IPAT 16PF Questionnaire, Form A (Cattell, 1962), 3) IPAT Culture Fair Intelligence Test, (CFT) Scale, 3, Form B (Cattell, 1959), 4) adapted version of Allport-Vernon-Lindzey Study of Values (Chowdhary, 1959). The marks obtained in matriculation and B.A./B.Sc. were taken as the measure of academic achievement. Intercorrelations were made. The following are the findings of the study: 1) the projective measure of n-Ach seems to be a compound measure, its major variance is associated with verbal and non-verbal measures of intelligence and factor A of 16PF while the two separable small

fractions of variance are associated with factors L, Q1, E and N of 16PF; 2) the academic achievement is positively related with intelligence and negatively with personality factors of Q3; 3) three second-order personality factors - anxiety, extraversion and neuroticism - reported by Cattell are replicated; 4) personality characteristics of persons with dominant, theoretical, religious, social, and aesthetic interests are also described.

172 JEYARAMAN V, VISVESVARAN H: Pronunciation of sounds of English by pupils studying in primary classes. Journal of Educational Research and Extension 1972, 8(3), 183-7.

The pronunciation of pupils of standard V was investigated by administering a few tests in pronunciation devised on the basis of the vocabulary studied by pupils. A differential study of the pupils was made with regard to sex, locality and the management of schools. The correlational study was made with respect to socio-economic condition, occupational status of the parents and the pupils traits as rated by their teachers. The following findings have been listed: 1) the difference of achievement in English pronunciation between girls and boys is insignificant; 2) pupils in urban areas are significantly superior to those of rural areas; 3) the pupils studying in private schools are significantly superior to pupils studying under public management; 4) the factors viz. general intelligence, interest, work habit, attendance etc. have a direct relationship with the achievement of pupils in English speech; 5) a significant correlation exists between the academic achievement scores and teachers' rating of pupils' habit and between the speaking ability and the achievement in test; 6) only 46% of the teachers handling English listen to th radio programmes in English arranged by the Regional Institutes o English; 7) a majority of pupils are unable to pronounce sounds and consonant clusters which have no equivalent sounds available in Tamil. It has been recommended that teachers should make the lessons attractive, recognise the importance of habit formation in English pronunciation, provide oral practice of speaking English in the classroom, and give special attention to the pronunciation of consonant clusters in the classroom.

173 KAKKAR S B: Can I.Q. predict academic success? Indian Journal of Psychology 1967, 42(1-4), 64-7. 3 ref.

The Intelligence Test Scores often used to predict academic success may give erroneous predictions when considering the individual. The Scattergram, showing relationship between arithmetic achievement and intelligence that the author gave in his study of a random

sample of Junior Model School, Jullundur in 1967, has been cited as an example. When coefficients of correlation and equations are used to predict a pupil's academic success, the two assumptions are that the nature of the individual's past is constant and will continue into the future, and that academic success depends solely on intelligence as shown through I.Q. However, this deterministic approach seems to be faulty and should give place to realistic approach in which individual differences may be measured on a more feasible assumption that a pupil is highly dynamic, his past nature may not continue into the future, and his achievement may be influenced by known and unknown factors.

174 PADMANABHAN NAYAR P: Role of numerical ability on science achievement. Kerala Journal of Education 1971, 3(1,2), 36-41. 8 ref.

The Numerical Ability subtest Form A of the Differential Aptitude Tests (D.A.T.) was administered to a sample of 345 boys and 315 girls studying in Standard X in the secondary schools of Trivandrum Revenue District, Kerala. The average marks obtained in the three terminal examinations in Science constituted the criterion of Science achievement. Two extreme groups in numerical ability (NA) were compared with their science achievement (SA). Similarly, two extreme groups in SA were compared with their NA. The data obtained were analysed and the following conclusions drawn: 1) numerical ability can be considered an important determinant of science achievement at the secondary school stage; there is no significant difference between boys and girls; urban students are superior to rural students; 2) high numerical ability would help pupils to have a better performance in school science and low numerical ability would result in low science achievement; and 3) high achievers in science tend to secure high scores and low achievers low scores on NA.

175 SIVADASAN PILLAI K: Rural-urban difference in Hindi comprehension of high school entrants in Kerala. Kerala Journal of Education 1971, 3(1,2), 42-5. 5 ref.

A test of comprehension in Hindi for pupils of Standard VIII was administered to a sample of 750 rural and urban students studying in standard VIII in Trivandrum District. Analysis of the data revealed that rural and urban pupils differed significantly in relation to their comprehension ability in Hindi. The rural areas were at a disadvantage because of lack of facilities and motivation.

176 VISANTHA RAMKUMAR: Ordinal position in family, self concept and achievement of college students. Journal of Educational Research and Extension 1972, 8(4), 211-16. 10 ref.

The present study has been made to find the relationship among the birth order, self concept and achievement of college pupils. A sample of 312 girls and 282 boys studying in Pre-Degree classes in seven colleges in Trivandrum was administered a self-concept measure and Nafde's Non-verbal Test of Intelligence. The ordinal position of the subjects was fixed by administering a Personal Data Sheet. The average of the total marks obtained in all the subjects for two term examinations constituted the achievement index. The findings are given as follows: 1) though there is significant relationship between ordinal position and self concept, ordinal position has no relationship with achievement; 2) when intelligence is controlled there is significant relationship between ordinal position and self concept or achievement.

ADMINISTRATION AND ORGANIZATION

177 ABDUR RAHIM: Teachers taught to teach - collegiate administration, Osmania University's first programme. Education Quarterly 1972, 23(4), 35, 36.

The Principals and Heads of departments were given instruction in some basic elements of management and managerial skills of college administration under a project which was jointly sponsored by the Osmania University, the Ford Foundation, the University Grants Commission, and the Administrative Staff College of India, Hyderabad. The objectives of the 14-day workshop-cum-training project were to provide a) required knowledge of core subjects related to higher educational administration, b) specific functional skills needed for effective college administration, and c) new attitudes towards a dynamic purposive and creative university education in India. It was ascertained from the participants that the project was a worthwhile experience.

178 AGGARWAL J C: Vidyālaya praśāsan tathā swāsthya śikgā (= school administration and health education). [Hindi]. New Delhi, Arya Book Depot, 1972. viii, 290p.

Contains discussion on the following topics: 1) definition, objectives and scope of educational administration; 2) school building and equipment; 3) institutional planning; 4) the

head of the school; 5) the teacher; 6) co-curricular activities; 7) time-table; 8) discipline; 9) self-government in schools; 10) punishment and rewards; 11) school and community; 12) examination and evaluation; 13) school library; 14) health education; 15) physical education.

179 ARUMUGAM K, NARAYANASWAMY N S: Study of the educational facilities needed in primary schools in Perianaickenpalayam Panchayat Union. Journal of Educational Research and Extension 1972, 8(3), 179-82.

The needs of 48 schools in Perianaickenpalayam Panchayat Union were studied with the aid of responses obtained to a questionnaire supplied to the headmasters of the schools. The main findings are as follows: 1) the schools were found to have inadequate teaching staff; a significant relationship exists between adequacy of teachers in schools and good results; 2) only 25% of schools arrange for periodical health check-ups for pupils, and 83.3% of the schools do not possess first aid kits; 3) more than 40% of the schools need teaching aids in Science, History, Geography, and 50% need teaching aids in Tamil, English and Mathematics; 4) all the 48 schools are poorly equipped with sports and games material, and many schools require gardening equipment etc. Based on these findings, appointing adequate teachers, arranging for periodical health check up of pupils through the primary health centre, supplying first aid kits to all primary schools, offering practical training through workshops to teachers in the preparation of teaching aids, and conducting periodic school improvement conferences have been recommended.

180 Autonomous colleges [Editorial]. Hindu 27 May 1972, p. 6, col. 2. 450 words.

Setting up of autonomous colleges for talented students has been favoured by educationists. These colleges are being allowed to frame the rules of admissions, examinations etc. The Education Commission was also in favour of such autonomy, provided the privilege was conferred on the basis of periodic review of the colleges' performance. Andhra Pradesh has a proposal to develop a few such colleges in the State. When this experiment succeeds and other States follow suit, autonomous status might be granted to selected colleges on an All-India basis as suggested by the UGC. The experiment of establishing autonomous institutions for the talented which could display initiative and greater competence should be encouraged.

181 CONFERENCE OF SOUTH INDIAN VICE-CHANCELLORS, THIRD, ANNAMALAI, 1972: Report. University News 1972, 10(5), 15, 16.

The proposals approved by the Conference are: 1) merging the Senate and Academic Council into a single advisory body and making the Syndicate more compact by restricting its strength to a maximum of twelve; 2) adopting the principle of student participation as recommended by the special committee of the University Grants Commission; 3) introducing the semester system and course work at the Masters' level in Science, Humanities and Commerce and at the undergraduate level in professional courses. The other suggestions are: 1) introducing a five-day, six-hour week with 180 working days, holidays being cut down to the minimum; 2) bringing about periodical exchange of ideas between the universities; 3) including in all Master's degree examinations a viva of 50 marks; 4) adopting the 10+2+3 formula regarding the years of study at school and college.

182 GURUGE A W P: Towards better educational management. New Delhi, Asian Institute of Educational Planning and Administration, 1970. xii, 156p.

The book is a collection of four papers written by the author: 1) 'Modern management techniques applicable to educational administration' gives a glimpse of the new management techniques that have been adopted in recent years in the fields of industry and commerce; 2) 'Educational finance and administration' raises some questions which fall into five categories - a) functional, b) organizational, c) legal, d) informational, e) attitudinal, and for all these the suggested solution is adoption in a suitably modified form a modern budgeting system such as planning-programming-budgeting system (PPBS); 3) 'Functional analysis of educational planning - internal division of functions and administrative organization' points out that the Ministry of Education is the most desirable administrative organization to undertake educational planning, and that the ideal machinery for planning is an Educational Planning Commission headed by the Minister himself; 4) 'The concept of life-long integrated education' highlights the plethora of activities which can legitimately be brought within the purview of life-long education and the diversity of approaches which have to be adopted to meet the requirements of an ever-widening clientele.

183 Ills of universities [Editorial]. Mail 12 May 1972, p. 4, cols. 1, 2. 600 words.

The Government's apathy in dealing with the ills of universities has been deplored. The following remedial measures have been suggested: 1) enabling the students to concentrate on their studies and resist the glamour of politics; 2) disbanding the youth and student wings of various political parties; 3) introducing some sort of selective admission to provide higher education mainly to the deserving students; 4) appointing an effective vice-chancellor, who must be a person of outstanding ability and scholarship, enjoying enough powers to put down irregularities and protect the university autonomy.

184 MATHAI S: Power politics in universities - new constitution needed to remove maladies. Mail 11 May 1972, p.4, cols. 3-7. 2000 words.

Suppression can only be a temporary means to control the maladies of universities. Some of the remedial measures suggested are: 1) appointing an academic and a non-partisan vice-chancellor and giving him real power to deal with the university affairs; 2) abolishing the senates and instead, the Government creating an autonomous supreme council for each university, with financial powers vested in it; 3) evolving a suitable machinery for selection of the Vice-chancellor who should be appointed by the supreme council; 4) empowering the supreme council to create vacancies and posts in the university and authorizing an executive council headed by the vice-chancellor with the power of veto to make appointments; 5) creating autonomous colleges; 6) making teaching, learning and testing less complex and more manageable in size, and creating a more personal and humane atmosphere in the classrooms and in examination halls; 7) providing job opportunities to non-degree holders and introducing job-oriented courses at the pre-university level.

185 Quality in education [Editorial]. Hindustan Times 24 June 1972, p. 5, cols. 1, 2. 700 words.

The ordinance amending certain sections of the Delhi University Act viz. 1) conferring powers on Delhi University to declare colleges conducting courses in Medicine, Technology, Music and Fine Arts as autonomous, and 2) enabling the Executive Council of the University to set up one or more college councils which would in effect run a number of arts, science and commerce colleges on behalf of the university with discretionary powers of their own, has been welcomed. Thus, the university would

engage itself with postgraduate teaching and research activities. As the college councils will have to deal with increasing number of students, they should be manned by able people to make the innovation a success. These changes would enable the maintenance of proper educational standards. In order to raise the quality in education, the Vice-Chancellor of the Delhi University pleaded for the right of the university to restrict admissions to colleges and offer those who get low percentage pass marks, admission to correspondence courses. However, if this stand of the Vice-Chancellor is not accepted, then it would affect the quality of education.

186 REGIONAL SEMINAR ON THE APPLICATION OF MODERN MANAGEMENT TECHNIQUES TO EDUCATIONAL ADMINISTRATION, NEW DELHI, 2-12 NOVEMBER 1970. Report. New Delhi, Asian Institute of Educational Planning and Administration 1971. iii, 542p. 98 ref.

The main objectives of the Seminar were to acquaint the educational planners and administrators with the theory and concepts of modern management and to make them aware of the application of some of the modern management techniques to administration in general and educational administration in particular. The report is divided into two parts. Part one presents details regarding the organization of the seminar, summaries of discussion papers presented at the seminar, a resume of discussions held on each paper, and major recommendations. Part two contains the full text of all discussion papers and a select bibliography on the subject.

187 SARAVAN KUMAR: Indian educational service. NIE Journal 1971, 6(1), 41-7.

A short account of how the Indian Educational Service (IES) that was created in 1886-87 fizzled out in 1924 has been given. It is observed that the tremendous expansion of education in the post-Independence period call for the creation of IES. The Kothari Commission (1964-66) has also welcomed the idea. Presently the members of the Indian Administrative Service (IAS) are involved in development of education in most of the States. Slowly and steadily the programmed educational administration, like programmed instruction is coming into vogue. This position demands a specially recruited staff. It is felt that the provincial educational service cannot deliver the goods and that there is a need for creating an IES. The following suggestions are given: 1) creation of IES should be a phased programme; a beginning may be made in one State or a Centrally administered area; 2) the IES should be looked upon as a means of implementing the Centre's advisory role as well as the States' educational programmes; 3) there should be special training and education for the IES candidates on the pattern of the IAS training; 4) the encadrement of the IES should include some selected posts of headmasters, district education officers, officers in the directorate and the secretariat, educational advisors in the Centre, some posts in the departments of education of universities, teaching staff in the proposed staff college for educational administrators, etc.

188 SHARMA M L: Organizational climate of schools, a comparative study. Naya Shikshak (Teacher Today) 1972, 14(3), 74-86. 11 ref.

The sample consisted of 56 headmasters and 570 teachers from 56 boys' as well as girls' schools. Out of 56 schools 34 were government schools. The organizational climate of the schools was studied by using the tool OCDQ developed by Halpin and Croft. The hypothesis sought to be tested was that the government secondary schools differ from private secondary schools in their organizational climate. The following are the main findings: 1) no significant differences were found to exist in the organizational climates of government and private schools; 2) staff members of a larger number of girls' secondary schools perceived the climate of their schools as 'controlled' as compared to boys' schools; 3) 'Closed' climate was most frequently perceived climate; this was followed by 'open' and then 'controlled' climate types; 4) no significant difference was found in all the three dimension (except 'Esprit') means associated with group behaviour; mean scores on 'Esprit' were high for government schools; 5) no significant difference was found to exist in all the four dimension means associated with leader behaviour between government and private schools; 6) disengagement associated with group behaviour was found to be high in the private boys' schools compared to private girls' schools; 7) intensity of 'thrust' associated with leader behaviour was found to be significantly high in girls' schools.

Student Participation

189 ABRAHAM A S: Student participation - dangers of hasty reform. Times of India 17 May 1972, p.8, cols. 3-5. 1200 words.

The unthoughtful manner in which the Western idea of student participation is being accepted by politicians and administrators alike has been criticised. Unlike in the West, student leaders in India, are politicians on the make, striving for personal gains rather than for the interests of their fellow students. Moreover, the average student in the West is older, better informed and emotionally more mature than his Indian counterpart who is most worried about security via a degree. He is not motivated by a desire to change the system but merely to bend it to selfish purposes. Hence, it has been urged that the advisability of student participation should be considered seriously before its introduction.

190 BIR SINGH: Who says students should not participate? NIE Journal 1972, 6(4), 27-31.

It is argued that students should be allowed to participate in all aspects of educational management including selection and promotion of teachers. Students' active participation should, in the long run, not only establish administrative and academic reforms in the educational system, but should contribute to mould national leadership in different fields. Student participation should not be merely in the form of a consultative machinery. It is noted with gratification that many of the Indian universities have already taken steps for student participation in the academic and administrative affairs.

191 MISHRA N C: Student participation in varsity affairs. Free Press Journal 8 April 1972, p. 4, cols. 3-6. 1500 words.

The demand for student representation in the academic and governing bodies of universities is made both by teachers and students. Young students are confident of managing the affairs of their institutions efficiently. The student-teacher consultative committee could be formed with student representatives selected on the basis of one or two from each class including postgraduate classes, professors in the departments and teachers to match the strength of student representatives. This committee could discuss all academic and administrative matters at regular intervals. Dr. T. Sen suggested that a committee consisting of three student representatives from each faculty, the Vice-Chancellor, the Registrar, the Controller of Examinations and the Dean of students should meet once in three months to keep the students informed about the background of administrative measures and to seek their suggestions about other measures to be taken. He also urged the formation of a student affairs committee to coordinate various student activities, a library committee and a finance committee and a placement and training committee to help pupils looking for work to finance their studies. The finance committee would discuss the university finances and present the student's point of view at the finance body. However, in India, the student participation is being acceded to under pressure. The Universities should be opened to new ideas and bring about follow-feeling in the campuses by allowing students to participate.

192 RAJAGOPALAN K R: Restricted scope for student participation. Mail 18 April 1972, p.4, cols. 3-5. 1100 words.

The Senate and the Academic Council being fairly large, even if students are given about 20 to 25 seats, their voice may not be effectively heard and are likely to be more frustrated than before. Similarly, in the smaller bodies like the Boards of Studies where the maximum number is only 12, lack of adequate subject knowledge would be a handicap to the student in his effective participation. Moreover, the tenure of students is not long enough to be able to get well acquainted with the rules and regulations prescribed for smooth functioning of the university bodies, and to use them to further one's field of interest. Hence, a deeper study of the problem should be made with only a healthy and fruitful participation in view.

193 Student participation / Editorial /. Hitavada 6 April 1972, p.4, cols. 1-2. 800 words.

Favouring the participation of students in the control of universities, it has been urged that the students be represented from post-graduate teaching departments. Such students would be able to put forth their suggestions with maturity. The students are not clear about what they expect to achieve by participation. Therefore, they should draw out clear proposals and objectives for pressing their demands and provide a guideline to enable authorities to support the measure. An understanding is absolutely essential that the student representatives would concede to the verdict of the committee or to vice-chancellor's ruling. The elders and the students should work in a spirit of reciprocation. The students should respond to the opportunity given to them for participating in University affairs and work wholeheartedly for the achievement of success.

194 VINAYAK J P: University administration - should students participate? Hindustan Times 1 April 1972, p.7, cols. 3-6. 1200 words.

In view of the rapid growth of the academic institutions and the resultant communication gap, involvement of students in the decision-making bodies like Senate, Academic Council, Boards of Studies, and Executive Council has been recommended. The proposal has been justified on the grounds that it will help teachers to teach better and students to learn better and that it has educational value. However, decision-making in certain areas like admission, appointment, promotion, examinations, etc. should be left to teachers, students having a right to offer comments and criticism. It has been underlined that the university authorities should have no fears that the student representatives will act irresponsibly.

195 BHADRIAH N: Functional literacy. Indian Journal of Adult Education 1972, 33(4), 11, 12.

The concept of functional literacy means that the adults must acquire an ability to read and write which is truly functional and that the literacy programmes must be linked with technical, agricultural, industrial, health, and home-making training, so that all dimensions of life-economic, scientific, health, vocational, social, etc. are developed in them. Due importance must be given to follow-up programmes and reading materials for neo-literates so that they maintain and improve their reading ability.

196 BUTT H: Population education for young adults. Social Action 1972, 22(2), 99-110.

There is need for population control. It is therefore necessary to consider how best to impart population education to out-of-school young adults. The approach so far to control population has been exclusively clinical and the major burden of selling the idea has been thrust on medical profession. The non-medical approach has been emphasised in this article. In pressing for population control, it will not be effective to aim at changing basic values. The economic, health and social advantages of having a small family have to be stressed. The educational programme has to employ the microcosmic approach which permits the use of concrete examples of immediate relevance easily grasped by the target population. People are not sufficiently altruistic to understand the global or national implications of population explosion. Having presented the case for the desirability of the small family, it remains to show that the means of controlling the size of the family are available, medically safe and also religiously and socially acceptable. The population education can be imparted by non-medical persons. For this, there should be a properly conceived organizational structure. Besides, the mass media can also be employed effectively. It is better to incorporate population education into the various socio-economic and learning situations for which there is popular demand.

197 CONFERENCE ON CONTINUING EDUCATION AND UNIVERSITIES IN THE ASIAN AND SOUTH PACIFIC REGION 1970, MADRAS: Continuing education and universities. New Delhi, Indian University Association for Continuing Education and University of Madras 1971, ii, 227p.

This publication contains papers discussed and the addresses delivered at the Conference. The Conference agreed upon to

make the following broad recommendations to the universities: a) a department of continuing education should be established within each university; b) as programmes are launched, the university would ascertain the needs of community; c) each department of continuing education should be advised by a committee, consisting of the Vice-Chancellor as Chairman and with a broad based membership consisting of persons belonging to the academic community as well as representative citizens residing within the area served by the university; d) the physical facilities of the university, such as the libraries, laboratories, halls of residence etc., should be readily made available for use in connection with programmes of continuing education; e) community involvement should be sought both in the planning and conduct of programmes of continuing education, and community resources in the form of personnel and phycical facilities should be utilised whenever possible.

198 GUPTA L N: Linking adult education with life. Naya Shikshak (Teacher Today) 1972, 14(3), 14-19.

Adult literacy has to play a major role in bringing about a more harmonious and just social order, apart from its need for general economic development. The most important factor in adult literacy is motivation. It is in this regard that functional literacy assumes importance. The programme has to be devised in such a way as to suit the peculiar needs of a particular area. To start with, 20% of the illiterates in an area chosen should be concentrated upon instead of attempting 100% coverage. The teaching should be made interesting. Audio-visual aids should be made use of. Special programmes should be devised for the children who accompany adult illiterates, particularly women. Adult literacy programmes should be coordinated with developmental projects such as canal project. Care should be taken to see that functional literacy does not become merely utilitarian programme without adequate emphasis on basic virtues which go to make good citizens.

COURSES OF STUDY

199 MATHIAS T A: Modernising the curriculum. New Frontiers in Education 1972, 2(1), 28-39.

The drawbacks of the system and methods of education in use in Indian universities have been pointed out as follows: 1) the syllabus prescribed is in great minute detail thus indicating the extent of the knowledge that a student need to possess in order to graduate; thus, the purpose of the university course has been taken to cram information into the

students in a limited time; owing to the stress laid on word-perfect information, tendency of using memory is encouraged; 2) the type and number of questions set at the examinations are descriptive in nature requiring almost a reproduction of text-book material; 3) the use of English as the medium of instruction and examination makes slavish dependence on memory; 4) the capacity for independent thought has been curbed in all the universities; 5) curricula is purely theoretical and have no relation to the actual problems of life in India; 6) the courses of study in rural colleges are also not related either to rural life or to programmes of rural development; 7) the curricula in Indian Universities are outdated. The remedial measures have been suggested as follows: 1) the syllabus should give in broad outline the areas of study with which students should be familiar; 2) no textbooks should be prescribed; only a list of reference books which cover the syllabus should be prescribed; 3) each Board of Studies should revise the syllabus at least once in three years to exclude outdated matters and to include the latest research and discoveries in the field; for this purpose the Boards of Studies should have qualified young men and women and one or two members outside the university who are competent and aware of advancing knowledge; 4) the structure of the courses should be changed to provide a large choice and combinations of subjects to students; 5) while the syllabus is to be constantly revised opportunities be provided for the teachers to keep up with advancing knowledge through attendance at seminars and special refresher courses; 6) the outdated methods of teaching should be replaced by seminars, problem-solving sessions, library sessions and other well-known pedagogical devices; 7) the examination system should be reformed by continuous assessment of pupils; 8) colleges should not be subsidised by the State through grants-in-aid. They should charge fees to run the institutions; 9) the first degree should be separated from the university and placed under an autonomous college Board. Only Master's degree should remain in the university and its level be raised to international standards.

CURRICULUM

200 AGGARWAL L N: Teaching economics in secondary schools - a point of view for developing curriculum. Educational Forum 1971, 16(2), 1-4.

The teaching of economics at the secondary level should encourage reasoned judgment and rational analysis of economic problems. A basic framework on which the syllabus in economics for the higher secondary classes could be evolved, has been

suggested as under: 1) information as to how an economy works, the various flaws in the economy; 2) various patterns of economics functioning in the world; 3) Indian economy; 4) basic concepts and simple principles of economics derived from the above three; 5) application of these principles for analysing practical economic problems facing India; 6) economic planning - as solution for economic ailments.

201 AIYA S V C: School science project of India. Delhi, National Council of Educational Research and Training, 1971. 13p.

The NCERT, which is the agency most concerned with the organization and execution of a school science project, and the Indian educational pattern have been described. The objectives of a major school science project are that the teaching of science at the elementary stage should be integrated with the environment in which the child grows, and towards the end of the middle school and, more particularly, at the secondary stage, considerable stress be laid on the applications of science and use of tools and gadgets. The implementation of such a programme requires pre-service of teachers as well as instructional material like teachers' handbooks, textbooks, demonstration kits and pupils' kits. A pilot project already launched with the assistance of the UNESCO and the UNICEF to realize the above has been described.

202 BAIRATHI M P: Vānijya śikṣaṇ yugānukūl kaise hoṃ? (= Commerce teaching - the question of keeping pace with time) / Hindi /. Naya Shikshak (Teacher Today) 1972, 14(3), 108-115.

Some of the drawbacks of the Commerce syllabus of the Rajasthan Board of Secondary Education are: 1) lack of relationship between theory and practice; 2) outmoded textbooks of Book-keeping, Business Methods, Banking and Commercial Geography; 3) defective system of teaching; 4) ill-equipped classes; 5) lack of orientation programmes for in-service Commerce teachers. Some suggestions for improvement are: 1) revising the syllabus and rewriting the textbooks; 2) the Board and the Department of Education providing opportunities for seminars and group discussions where the services of experts can be availed of; 3) starting in-service training programmes for Commerce teachers; 4) providing funds to equip Commerce classes with latest Commercial devices; 5) including practical examinations to test application of knowledge.

203 BLANDOW D: Need for and requirements of work-experience. NIE Journal 1971, 6(1), 18-22.

All the sciences are eventually related to the production process as a source of social wealth and this will form the basis of evaluation of all scientific activities. Therefore, work-experience must be a subject for all children without exception and an integral part of general education. It is imperative to prepare basically the pupils for their future occupations during their schooling. In all professions more advanced techniques and tools are to be used and so the citizens should be trained in such techniques and tools. The development of the child's social relations is an important task for work-experience. From the pedagogical point of view, linking the students' training with productive work is necessary for the unity of the mental, moral and physical development of the child. An overview of the need for and place of work-experience is given diagramatically. Linking the productive work with the idea of general education means that work-experience has ramifications and similarly other subjects have ramifications with the area of work-experience.

204 DEV INDER SINGH: Education for proper social behaviour. Educational Forum 1971, 16(3-4), 1-6.

Next to home, school is the formal agency to look after the social development of the child. The school should socialise the child in the following manner: 1) the curriculum having sociological approach; 2) the subject matter being an effective instrument of social control; 3) laying primary emphasis on the social behaviour outside the classroom; 4) providing socially desirable knowledge, skills and experiences; 5) providing social interaction in various social situations; 6) making available opportunities for social and group learning such as games, dramatics, projects, debates and other activities; 7) enforcing social discipline and social control through a body of rules, regulations, moral and social values; 8) developing pupils into good citizens, increasing their judgement, initiative, independence and social competence; 9) the content of education being determined by social environment of the pupils.

205 KRISHNAN V S: Population education. Hitavada 19 April 1972, p.4, cols. 4-7. 1080 words.

Population education should create in the minds of youth and children, a rational, scientific and realistic attitude towards the demographic problem. Broad concepts of health and economics of family as a social unit and elementary ideas

on dynamics of population growth, the inter-relationship between total population and the resources of the nation should be taught in graded stages at primary, middle, and secondary schools and at university classes. The subject should be integrated with social science, geography and other similar subjects and form a part of comprehensive educational programme. Teachers of high calibre, specially trained in the method of teaching this subject should be provided to introduce the subject in logical and scientific manner. The programme of population education should also cover the out-of-school youth through extension work or through various media of audio-visual instruction. A course of training should be given to population educators working as multi-purpose workers engaged in a school system and working among rural youth groups, etc. Population education would develop in youth the right attitudes for establishing social equality and economic justice.

206 New course / Editorial /. Times of India 28 April 1972, p.6, col. 1, 500 words.

The Government's decision to teach Marathi compulsorily for three years from standard six to eight in non-Marathi-medium schools but exclude it in the examinations will not serve the Government's aim that all non-Marathi students should gain a working knowledge of the language. The Government's purpose can be served only if students' promotions from one standard to the other are based on passing the Marathi in paper in the final examinations. It has been suggested that a further deterioration in standards can be avoided by not including an optional subject in the minimum five papers in which a student must pass in order to get through the SSC examination and by raising the minimum percentage required to pass in these papers from 35 to 40, while the minimum for the remaining two or three papers should not be less than 35. The Government's decision to scrap its own earlier proposal to have a public examination in two subjects at the end of standard IX in favour of one mammoth test in standard X has been regretted.

207 PAL B N: Family life education in Indian schools. NIE Journal 1971, 6(1), 29-33.

The family life education (FLE) to be useful and functional must conform to the cultural norms and the social and private needs of the society. Important objectives of FLE are:
1) preparing students for better performance in family living;
2) promoting cooperative living among family members;
3) inculcating among students a sense of community and integrated

living so that the family does not stand in the way of the realisation of the accepted objectives before the community; 4) creating a more progressive and sympathetic outlook on national problems. FLE need not be confirmed to school stage alone, it should form an important part of adult education also. The general content of FLE should include education about food, consumption, home living, dress, sex, culture, religion, morals, ethics, etc. FLE has to be a phased one spread out for the entire schooling period. FLE for primary, middle and secondary school stages has been proposed.

208 SRIVASTAVA P L: Objectives of home science at secondary level; NIE Journal 1971, 6(2), 29-33.

The broad objectives of home science have been cited as - 1) developing an appreciation of and the basic abilities and skills necessary for family living; 2) development of knowledge and abilities fundamental for entering college studies in home science; 3) knowledge of various professions or vocational training open to high school home science students. The specific objectives have been described and grouped under the following subject headings: 1) food and nutrition; 2) housing and home management; 3) clothing - personal and family; 4) child development and family relationships; 5) family relations.

ECONOMICS OF EDUCATION

209 DATT R: Institutional cost and efficiency of education in colleges of the Panjab University. Manpower Journal 1972, 7(4), 56-86.

The purpose of the study is to analyse the factors affecting unit cost of college education and then to examine if there exists any correlation between cost factors and efficiency of the educational institution. The study covers 67 colleges of the Panjab University. The efficiency index has been defined as the ratio of total students passed to total students admitted. The variables included in the analysis of unit costs and efficiency are: enrolment, age of the college, average pay of the teacher, teacher-pupil ratio, and percentage of arts to science students admitted. The influence of these variables on cost of education per student admitted, percentage of students passed to students admitted and cost of education per student passed has been examined. The type of management - government/ non-government - has been included as a dummy variable. The important conclusions arrived at on the basis of findings are

as follows: 1) It is very necessary to minimise cost per student passed by reducing the margin between students admitted and students passed. 2) Higher education in Panjab is operating at about 52% efficiency level. 3) The crucial factors affecting cost per student passed are enrolment, ratio of arts to science students admitted, pupil-teacher ratio and average pay of the teacher. 4) The efficiency of the institution is not linked to the teachers' level of wages. 5) The teacher-pupil ratio is a variable which increases unit costs, but being directly associated with efficiency, it tends to reduce cost per student passed. The principle of selectivity should be applied in admissions to science courses. 6) Cost per student admitted as well as cost per student passed are inversely related to enrolment.

210 PADMANABHAN C B: Economics of educational planning in India. New Delhi, Arya Book Depot, 1971. viii, 176p.

The book is an attempt to provide the techniques of economic analysis to the educational administrators to enable them to formulate a comprehensive and purposeful educational planning. The contents of the book include: 1) evolution of modern approaches to educational planning; 2) basic concepts in economics relevant to educational planning; 3) economic growth and techniques of projecting the national accounts; 4) setting up targets for enrolment on the basis of the manpower requirement for economic growth; 5) financing and costing of our educational plan; 6) an alternative approach to planning of education; 7) efficiency and productivity of education; 8) cost benefit analysis in educational planning; 9) systems analysis and other management techniques for educational planning and administration; 10) educational planning and budgeting; 11) economic analysis and new educational techniques; 12) economic analysis and vocational and technical education; 13) recent trends in economics of education and economics of educational planning.

EDUCATION : GENERAL

211 ASRANI J: Schools or penitentiaries? Hindustan Times, Sunday World 16 April 1972, p.1, cols. 1-5; p. 2, col. 6. 2500 words.

It is regretted that expansion of education is being achieved at the cost of the teacher-pupil ratio and relationship, and that undue amount of money is being spent on school buildings. It has been suggested that everybody connected with school education must recognize a) that a school must always remain

a small unit of not more than 600 pupils, with small classes and a manageable teacher-pupil ratio, b) that the school income must be spent on the educational needs of the children on the rolls, c) that the cost-burden of expansion should not be placed on these children but should be a charge upon society as a whole. The following measures have been recommended to improve the present situation: 1) levying specific education cess at the State level, and taking loans from the banks; 2) designing school buildings in such a manner that a part could be rented out to commercial establishments; 3) modernizing teacher-training colleges.

212 CENTRAL ADVISORY BOARD OF EDUCATION, COMMITTEE ON SCHOOL BUILDINGS. Report. New Delhi, Ministry of Education and Social Welfare, 1971. 65p.

The Central Advisory Board of Education in its 35th meeting on May 2-3, 1970 passed a resolution emphasising the urgent need to provide buildings to educational institutions especially at the primary stage. The Union Education Minister appointed a Committee on School Buildings in order to examine the problem and to prepare concrete proposals for action. Brief summary of the recommendations of the committee are given below: 1) the committee urges the Government of India to set apart Rs.10 crores per annum for the next ten years as grants to the States Governments specifically for construction of school buildings. If necessary, half of the amount may be given as loan and the rest as grant; 2) a revolving fund of at least Rs.10 crores may be set up from which loans could be given to the State for the construction of school buildings; 3) in order to mobilise local resources for school buildings following steps are recommended - a) funds may be collected through lotteries, b) local people may be asked to donate one or two rooms at the time of birthdays, marriages etc, c) religious institutions may be encouraged to donate buildings as part of their programme, d) other avenues like staging plays, organising exhibitions should be explored for raising funds for school buildings, e) contributions in kind such as cement, food for paying for labour etc. may be collected; 4) the cost of school buildings may be reduced by adopting the designs and suggestions of the Central Building Research Institute; 5) priorities may be assigned for construction of new buildings, highest priority being given for schools now being held in open and for completing incomplete buildings followed by schools conducted in tents, and those having rented accommodation.

213 GOVINDARAJAN S R: Purposeful education in Tamil Nadu. Hindu 2 June 1972, p.6, cols. 4-8. 1200 words.

In the context of the conflicting views regarding the duration of school and college education, the following compromise has been suggested: A ten-year school course should be followed by a one-year PUC (Pre-Tech., Pre-Med or HSC) into which admission will be on the basis of merit and much restricted. The Pre-Tech will be in engineering colleges, the Pre-Med in medical colleges and the HSC in some selected schools. Students who fail to get into medical or engineering colleges after passing the Pre-Tech or Pre-Med courses will go for diploma courses in the respective fields. The degree course will be of three years' duration and those that get into it from the PUC must have reached a definite level of proficiency. In the alternate structure meant for weak students, there will be a two-year course with an academic stream and a vocational stream catering to the majority. The two-year course should be entrusted to a State board. Junior colleges conducting the two-year course may be called as Institutes and affiliated to the State board. Three-year degree colleges need not be run in remote villages and the colleges offering only a few degree courses may be converted into Institutes with several vocational streams. The proposed schemes can succeed only if the Government give up: a) the present system of free education at all levels upto the PUC and b) the prescription of a degree as a minimum qualification for public services (except the first cadre executives). The three-year degree course must be very specialized and vigorous and the overall economic and industrial planning must be such as to create many more jobs.

214 MAHAPATRA H: Our education at a glance. Educational Forum 1971, 16(3-4), 7-11.

The moral, cultural and spiritual degeneration of teachers and students, exploitation of students by politicians, parental apathy, increase in the number of experiments in education, lack of justice and impartiality at higher levels have been underlined as the major defects of the present educational system. Some of the remedial measures suggested are: 1) selecting the right type of teachers; 2) raising the financial and social status of teachers; 3) standardising and centralising education at all levels; 4) imparting moral instruction to students; 5) forming democratic institutions in schools and colleges like student unions, parliaments and clubs, and increasing the number of curricular and co-curricular activities; 6) prohibiting political interference in educational institutions; 7) forming Parents Associations and giving them adequate representation in educational administration and management; 8) formulating educational reforms only after due deliberation and ensuring their irrevocability once implemented.

215 MUKERJI S N, OAD L K: Bhāratīya śikṣā - sthiti-viśleṣaṇ tathā sambhāvanāeṁ (= Indian education - analysis and probabilities of the situation). [Hindi]. Arga, Vinod Pustak Mandir, 1972. ii, 213p. 30 ref.

Contains essays by various authors on different aspects of Indian educational problems. Chapter headings are as under: 1) historical background of modern Indian education; 2) organisation of Indian education; 3) pre-primary education in India; 4) primary education in India; 5) secondary education in India; 6) higher education in India; 7) teacher education in India; 8) technical education in India; 9) woman's education in India; 10) adult education in India; 11) education and language problem; 12) some experiment in Indian education; 13) progress and problem of education in Rajasthan; 14) conclusions.

216 SHENOY G L: Is higher education spurious? University News 1972, 10(5), 18-20.

The unprecedented expansion of higher education has been underlined as responsible for the problem of educated unemployment. The following remedial measures have been suggested: 1) paying more attention to elementary education; 2) diversifying education at the high school stage; 3) affiliating colleges to a college Board under the overall supervision of the university; 4) higher education must support itself from the fee collected from students; 5) offering scholarships on a large scale to the deserving students; 6) using regional languages as the media of instruction at all levels with a provision for link language; 7) granting sufficient autonomy to colleges in the matter of syllabi and examinations.

217 TANEJA V R: Educational thought and practice. New Delhi, Sterling Publishers, 1971. 380p.

Discussion on the subject has been divided into five parts: 1) education - meaning, function and aims; 2) impact of philosophical thought on education; 3) inspiration from educational philosophers; 4) education for what? 5) current thought and practice.

218 VERA R K: Education for economic growth. Hindustan Times 9 May 1972, p.5, cols. 3-6, 8. 1500 words.

It is pointed out that China has adopted work oriented education in the university stage and that it imparts skills to pupils in accordance with the needs of the country. In India, Gandhiji's Wardha Scheme did not get a fair trial and perhaps the reform should

have started at the university level instead of at the primary level as has been done in China. Moreover, the basic structure of education in India has remained unchanged since pre-independence period. The government and its agencies are now providing various incentives and organising special orientation programmes at a number of centres to assist educated unemployed to set up their own small production units. The technological and other educational institutions are not inducing pupils to assimilate a sense of achievement essential for successful entrepreneur. The colleges and technical institutions should build into their curriculum a sense of realism and practical knowledge to familiarise students with the problems of society and make education productive in the real sense.

219 **YBCLE B B, SARASWATHY P R:** On estimating the school-age population for compulsory education in some ECAFE Countries. Indian Educational Review 1972, 7(1), 114-22.

An attempt has been made to estimate the population in the compulsory (first level) school-going age groups for most of the countries in the ECAFE region by interpolation from the available population projections by age.

EDUCATIONAL PSYCHOLOGY

220 **ANANT S S:** Social pressures towards learning and performance. Indian Educational Review 1972, 7(1), 177-86. 19 ref.

A brief summary of the research in the area of social influences on group functioning has been presented. The following are the factors which contribute to the acceptance of social pressures and influences: 1) group cohesiveness or the attraction of the group; 2) status of the person exerting influence; 3) environmental factor; 4) nature of the atmosphere, that is whether democratic or authoritarian. The social pressures on the child making him learn and perform usually come from his family, the peer group, the community, the teacher, etc. Investigations should be conducted to find out the relative emphasis on scholastic performance by various socio-economic classes; the varying influences of persuasive pressures and commands; the effect of the status of the person exerting pressure; and other related factors. The planning and organization of group activities in the school should be such that these activities become the focal point of learning. Emphasis should be laid on the social aspect of learning.

221 BASUMALLIK T, BANERJEE D: On the relationship between achievement motivation and risk taking. Indian Journal of Psychology 1967, 42(1-A), 93-6. 11 ref.

The present study was made to see whether the predicted curvilinear relationship between achievement motivation and risk taking behaviour holds between an objective measure of nAch and risk taking under hypothetical situations. Seventy five male graduates, coming from all parts of India and studying at an institute of public health education and research, were administered the nAch scale of the Edwards Personal Preference Schedule and the Choice Dilemmas Procedure Instrument. A chi-square test was made comparing the high and low nAch groups in relation to risk-categories. The chi-square ($_x^2 = .27$) was found to be non-significant, showing that the high nAch group did not differ significantly from the low nAch group in the selection of intermediate levels of subjective probability. Thus, the expected curvilinear relationship was not obtained in this study.

222 BIR SINGH: Review of research in classroom group behaviour. Indian Educational Review, 1972, 7(1), 195-208. 32 ref.

A review of research in classroom group behaviour has been made, considering significant studies conducted between 1939 and 1965, under the following heads: nature of groups, cohesiveness, communication, structure, norms, goals, group composition, instructional leadership and frustration. Major techniques such as the following for changing group behaviour have been devised: 1) group-decision techniques; 2) problem-solving methods; and 3) techniques for studying groups. To understand children's group behaviour - in order to change it - various techniques such as the following are used by educational investigators: 1) observation, 2) sociometric techniques, 3) questionnaires, 4) cumulative records, 45) anecdotal records, 6) time sampling, 7) group biography, and 8) guide to group characteristics. It is advocated that teachers should attempt to make some studies of their own classroom groups after gaining the knowledge needed to conduct experiments.

223 BOSE S: Effect of group processing on MMPI scores of a group of tribal adolescents. Indian Educational Review 1972, 7(1), 141-52. 22 ref.

The study aims to evaluate the efficacy of group processing to change attitude and improve adjustment status of a group of tribal adolescents of Darjeeling Hills as detected by comparing their pre- and post-programme participation MMPI scores. The physical education programme selected for the study consisted of

a list of highly organised group activity aimed at developing the following qualities : i) self-responsibility; ii) self-assessment capacity; iii) group belongingness and loyalty; iv) understanding others and sharing with others. The subjects selected were 70 tribal willing adolescents who were eager to participate in the programme, and 70 who were unwilling. All were subjected to the group processing programme for two years. Their pre and post-programme scores on MMPI were compared. The results proved the efficacy of group processing in physical education programme for a limited period on the experimental group in improving the morale and family relations aspects. An obvious fact in the field of educational processing is to expect and wait for an emerging effect. The said expectation had been fulfilled also in the social adjustment aspect of the experimental group. The effect of group processing to improve the motivational status of an unwilling group by becoming willing one due to acquirement of basic democratic qualities had also been observed.

224 BRAHMANAND JHA 'SUMAN': Similarity of operations and retroactive inhibition. Indian Journal of Psychology 1967, 42(1-4), 44-7. 6 ref.

The purpose of this experiment was to investigate the difference between retroactive inhibition resulting from i) learning both the original and interpolated tasks by the complete presentation method, and ii) learning the original task by complete presentation method and the interpolated task by the anticipation method. It was found that a) retroactive inhibition took place in both the conditions, b) the amount of inhibition from learning both the original and interpolated tasks by complete presentation method was greater than the amount of inhibition from learning the original task by complete presentation method and interpolated task by anticipation method. It has been pointed out that learning both the original and interpolated tasks by similar method produces more inhibition than learning it by different methods.

225 CHOUDHURI A: Emotionality and parent-child relationship. Indian Journal of Psychology 1967, 42(1-4), 89-92. 12 ref.

It was hypothesized that a significant relationship exists between emotionality of children and their perception of their parents' behaviour as punishing. To verify the hypothesis, one hundred male school students (in the age range 15-17 years) of Calcutta were administered a personality inventory constructed by the author, to assess their emotionality, and the adapted form of the Parent-child Relations Questionnaire (Roe-Siegelman, 1963) to have their assessment of their parents' behaviour as punishing. The coefficients of correlation between the two factors, as calculated by the Pearson Product Moment Correlation Method (Guilford, 1956) were significant, and thus, the hypothesis was proved correct.

226 DE B, JAISWAL M P: Sex differences in value patterns of adolescent students. Indian Educational Review 1972, 7(1), 187-94. 13 ref.

In this study on the value patterns of Indian adolescents, the sex differences in the expressed values among members of the same socio-economic group have been investigated. The Allport-Vernon-Lindzey Values Inventory was administered to 100 arts and science high school students (50 boys and 50 girls), selected from the middle socio-economic group by means of Kuppuswami's (1962) socio-economic status scale. Other variables like academic achievement, mothertongue and religion were also controlled. The findings generally lead to the conclusion that sex differences in values do exist on the aesthetic and social scales. Girls have higher aesthetic appreciation whereas boys have shown more sociability than the girls. Boys also have higher theoretical scores. No significant sex difference is observed in the religious, political and economic life of adolescents.

227 DE B, SHAMBHOO PRIYA: Some personal and academic correlates of achievement motivation. Indian Journal of Psychology 1972, 47(1), 55-64. 17 ref.

An attempt is made to explore the relationship of some of the personal correlates - birth order, parent's economic status and parent's education level - with achievement motivation. One hundred and forty postgraduate students of science, arts and commerce faculties were administered 1) Mukerjee's Sentence Completion Test (Hindi version) and the 2) personal information schedule. The results supported the hypothesis that students of these faculties differed significantly with each other on academic motivation. There was significant relationship between achievement motivation scores on the one hand and birth-order, economic status and educational level on the other.

228 DUTT N K: Study of the escapist attitudes in postgraduate students. Indian Journal of Psychology 1967, 42(1-4), 58-63. 10 ref.

A preliminary attitude scale with 60 items covering both the areas of other worldliness and self-surrender was prepared adopting the Likert's method of summated ratings and administered to a random sample of 90 post-graduate students of the Punjab University. The uppermost 25 statements with higher Index of Discrimination were selected for the final form, which was administered to 200 post-graduate students of the Punjab University. They were in four groups: boys-arts (50) , boys-science (50), girls-arts (50), girls-science (50). The split-half reliability

(corrected by Spearman Brown Formula) was .95, and the reliability coefficient calculated by K.R. formula 21 was .96. The expert opinion on the scale also established its validity. The findings are: 1) the distribution of the attitudes in all the groups was normal; 2) the girls had significantly stronger escapist attitudes than boys; 3) there were no differences in escapist attitudes between Arts and Science groups; 4) all the groups were equally variable.

229 GOKULNATHAN P P, MEHTA P: Achievement motive in tribal and non-tribal Assamese secondary school adolescents. Indian Educational Review 1972, 7(1), 67-90. 34 ref.

The relationship of achievement motivation with variables relating to the racial, socio-cultural, educational and economic background studied. A sample of 383 secondary students (294 boys and 89 girls) were given the TAT test prepared by Mehta (1969) to measure n-Achievement. There were 68 tribals and the rest were non-tribals in the sample. The following are the salient findings: 1) the tribal pupils had higher n-Achievement than the non-tribals; 2) there were significant sex differences in the n-Achievement levels, girls showing superior achievement motivation; 3) socio-economic status did not show any regular and definite relationship with n-Achievement; 4) significantly greater n-Achievement level was found among tribals, girls and rural residents.

230 JARNAIL SINGH, MALKIAT SINGH: Study into the relationship of job values and vocational choices of final year higher secondary school students. Journal of Educational Research and Extension 1972, 8(3), 160-5. 5 ref.

The vocational choices of 150 boys and girls from 20 higher secondary schools of Hoshangabad district were elicited through a questionnaire. The vocational choices of both the sexes and their job values were determined using the technique of inverse weighting. The main findings are as follows: 1) majority of the students have decided their future by the time they reached the final year of higher secondary schools; 2) engineering, medicine, military service, teaching and executive jobs were preferred by boys, whereas medicine, engineering, law and military service were the most liked vocations for the girls, clerical job, business, police and librarianship were least preferred professions; 3) courses of study and economic status of the families have a definite effect on the vocational choices; 4) rural boys studying science preferred military service while their urban counterparts preferred engineering; among the arts students the urban boys preferred agriculture while the rural, the business; 5) rural girls studying arts desired the clerical jobs whereas urban girls

preferred teaching; both rural and urban girls studying science preferred medicine; 6) hilly and non-hilly area girls showed their preference to medicine; 7) majority of boys and girls preferring engineering or medicine belonged to higher income group; 8) interesting work and high pay were the two job values of both the sexes; 9) interesting work and motive of national and social service were ranked second and third by boys, and high pay and greater scope of promotion by girls; 10) parents have influenced their children in their vocational choices and teachers have no influence in this respect; 11) interests and aptitudes of students have a definite bearing on the choice of their vocations.

231 KANUNGO R: Role of meaning in verbal learning and recall, an overview. Indian Journal of Psychology 1972, 47(1), 1-13. 48 ref.

Presents an overview of the psychological approaches that have led to a good deal of research and theory in the area of verbal learning and memory processes. In a specific sense, the concept 'meaning' refers to any single measurable aspect of the verbal symbol characterising its referent function, such as its communicative effectiveness, its connotations, associations, or imageries. These specific meanings represent different independent dimensions on which meaning of any verbal unit can be measured. Each of these specific meanings - i) connotative meaning, ii) associative meaning, iii) imaginal meaning has been considered as a potent variable influencing verbal learning and memory processes.

232 KOSHY PANICKER M, VISVESVARAN H: Attitude of college students towards moral values. Journal of Educational Research and Extension 1972, 8(4), 238-40.

A questionnaire seeking personal information and socio-economic status of the parents and an attitude scale covering the areas viz., personal and academic factors, cocurricular activities and relationship with the public were administered to 360 college students from the three classes PUC, B.A., and B.Sc. The findings are: 1) girls have more favourable attitude towards moral values than boys; 2) there is no significant difference among the various religious groups with regard to moral values; 3) students of higher academic achievement have a more favourable attitude towards moral values than those of lower academic achievement; 4) students studying in private colleges have a better attitude towards moral values than those in government colleges; 5) a significant relation exists between the daily prayer habits of pupils and their attitude towards moral values; 6) visits to temples, mosques etc. have a significant relation with the attitude scores of pupils.

233 MANGAMMAL S K: Place of emotion in educative process. Educational Forum 1971, 16(3-4), 50-7. 5 ref.

The need for proper emotional development in children and the role of education in effecting this have been underlined and illustrated with a case study. Education in schools and primary schools in particular should satisfy the following characteristics to bring about emotional integration among children: 1) development of right type of emotions such as anger or enthusiasm for a noble or national cause; 2) inducement of proper companionship and healthy competitions among students; 3) provision of right type of incentives; 4) creation of proper type of substitute emotions to eliminate inhibitions among children.

234 MERCY ABRAHAM: Relation between intelligence and adjustment of secondary school pupils. Kerala Journal of Education 1971, 3(1,2), 26-30. 6 ref.

A sample of 820 secondary school pupils of Trivandrum District (429 boys and 391 girls) was selected from 8 schools classified as good, average and poor on the basis of the average of the percentage of pass in the SSLC examination during the three years preceding the study. Progressive Matrices Test and the Kerala University Personality Scale were administered to the sample for measuring intelligence and personal adjustment. On the basis of the data, the pupils were identified as belonging to high intelligence, low intelligence, average intelligence, high adjustment, low adjustment and average adjustment levels. Correlation between the variables revealed that adjustment on the whole did not exercise any important influence on intelligence test performance except for the high adjustment group.

235 MOHAN MATHEW, MATHEW GEORGE: Relationship between authoritarian tendency and anxiety in teachers. Kerala Journal of Education 1971, 3(1,2), 31-5. 11 ref.

A sample of sixty teachers teaching in the VI and VII standards in the schools of Muvattupuzha Educational District in Kerala was selected and each teacher was observed continuously for 45 minutes while teaching the class to measure authoritarian tendency. Anxiety was measured by administering IPAT Anxiety test to a sample of 200 teachers belonging to the same District. Analysis of the data lead to the following conclusions: 1) the authoritarian trait in teachers is a measurable personality variable; the authoritarian tendency in teachers even though environmentally conditioned, is normally distributed; 2) teachers will be more authoritarian in the absence of an outside observer; 3) men teachers are more authoritarian than women teachers; 4) less experienced teachers are more

authoritarian than more experienced teachers; 5) male teachers manifest more covert anxiety whereas female teachers reveal more overt anxiety; however, women are more anxious than men; and 6) a positive relationship exists between authoritarian tendency and anxiety.

236 NAGARAJAN V, FEROZE M: Concept of 'happiness' among primary school children. Journal of Educational Research and Extension 1972, 8(4), 234-7.

To investigate the concept of happiness, a sample of 136 boys and 130 girls from rural and urban schools and studying in III, IV and V standards was asked to judge six concepts viz., self, teacher, school, money, study and play against a series of six descriptive semantic differential scales. Thirty pupils were also given the Q-sort test. The children were asked to sort 60 cards each containing a stimulus statement. The findings are: 1) the statements - study, going to school, prayer, going to temple, speaking truth, mother etc. emerged as causing happiness in children; 2) though adults considered that children would derive happiness through play and travel, the children considered the factors such as study and school as their main source of happiness; 3) all students gave a low value to the self concept when compared with the values on other concepts; 4) students of 10 years of age gave the highest value to the concept 'study'; 5) students of III standard gave a high value to school and play concepts, and lesser value to study, while IV and V standard students gave highest value to the concept 'study; and 6) urban student valued the concept 'teacher' most, while the rural, the concept 'study'.

237 PURUSHOTHAMAN S, VENKATESWARA RAO T: Study of the personality and mental health of V grade children of Coimbatore District. Journal of Educational Research and Extension 1972, 8(4), 226-33. 7 ref.

Four variables of personality and mental health viz., adjustment, dependency, class-room trust and initiative levels of the pre-adolescents were surveyed. A sample of 486 children of V grade drawn from 13 schools in Coimbatore District was administered: 1) Pre-Adolescent Adjustment Scale of 40 items to measure adjustment towards home, school, teacher and peers; 2) Pre-Adolescent Dependency level; 3) Pre-Adolescent Class-room Trust Scale comprising 8 items to measure the classroom trust in children; and 4) Pre-Adolescent Initiative questionnaire of 6 items to measure initiative. These tests constructed in English by the Indian Council of Medical Research were translated into Tamil for the study. The results are: 1) the children have significant, but low degree adjustment towards

home, peers and in general; however, adjustment towards school and teacher is not adequately high, there is neither dependence nor independence in the pupils; 2) the pupils are average in their interpersonal competence level with regard to class-room trust; 3) the children are average in their initiative level. Based on these findings a few general recommendations have been made.

238 RABINDRADAS B, NARAYANAN S: Study of level of aspiration among the acoustically handicapped and normal. Psychological Studies 1972, 17(1), 57-63. 29 ref.

An attempt has been made to investigate the level of aspiration behaviour among acoustically handicapped and normal adolescent students. Rotter's level of aspiration board was individually administered to 50 normal and 50 deaf and hard of hearing students. The findings showed that the acoustically handicapped presented a level of aspiration similar to normal with regard to setting up and maintaining their aspiration in an experimental condition while no difference was found between the two groups in shifting the level of aspiration in keeping with the previous performance, significant difference in favour of normal was found in shifting the level of aspiration in a direction opposite to that of the past performance. Finally, the handicapped were found to have low level performance and aspiration as compared to the normal. The findings suggest that the differences found between the acoustically handicapped and normal students may be due to the stressful condition of the handicapped than due to any personality differences between them.

239 SHANTHAMANI V S: Relationship between intelligence and certain other variables. Indian Journal of Psychology 1967, 42(1-4), 9-18. 8 ref.

The Alexander's Battery of Performance Test of Intelligence was administered to 300 girls of the three grades of high school, 100 in each grade. The obtained results were statistically treated. The conclusions are: 1) there seemed to be some influence of optional subject on mean performance; 2) order of birth had no influence on intelligence; 3) educational qualification of the father had no effect on the child's intelligence; 4) children whose parents were in the professional, agricultural and managerial occupations tended to be superior in intelligence as compared to children whose parents were in other occupations; 5) positive relationship existed between the economic status of the parents and intelligence of their children; 6) the single or joint family pattern had no effect on intelligence of children; 7) rural and urban environment had no considerable effect on intelligence; and 8) caste had an influence on intelligence of students.

240 SHARMA K N: Creativity as a function of intelligence. Psychological Studies 1972, 17(1), 64-7. 18 ref.

A sample of 204 tenth class and intermediate class students of Arga city were administered Jalota's Test of General Mental Abilities, and two creativity tests - a) Srajanatmakta Pariksha and b) Varn Viparyas Pariksha. The IQ distribution of the sample was tested for normalcy and was found to be normal. The low and the high IQs were compared on their creativity performances. The high intelligent subjects performed better on creativity tests. The inter-level variances were studied between the creativity scores at different IQ levels. It has been found that the rise in creativity moved along with rise in intelligence upto a certain level, and thereafter rise in intelligence was not very helpful in causing rise in creativity scores.

241 SINGRU M: Role of acquiescence in two measures of achievement motivation. Psychological Studies 1972, 17(1), 41-4. 5 ref.

Two samples of 9-11 grade students from two cities were administered 1) Mukherjee's Sentence Completion Test (SCT), 2) Myer's Personal Reaction Inventory (PRI), and 3) Couch and Keniston's Agreement Scale (C-K A). Product moment correlations between the three types of scores were calculated. No relationship was found between acquiescence scores and SCT. The general negative relationship between Myer's PRI and C-K A scale suggests that the agreeing tendency as evaluated by C-K A scale is absent while responding to Myer's PRI.

242 SINDWANI M: Learning and discipline. NIE Journal 1971, 6(1), 11-17.

The meaning and importance of discipline have been stated. The modern trend in discipline respects children for their efforts to act independently and suggests that the opportunity should be provided for expressing their independence in acceptable ways. How to prevent discipline problems before they occur, how to nurture effective discipline, misbehaviour and ways of correcting them, how to use punishment and what punishment to give have all been detailed.

243 SINHA D, VARMA M: Knowledge of moral values in children. Psychological Studies 1972, 17(1), 1-6. 8 ref.

A child with the help of conscience builds more or less definite standards and principles by means of which he judges others and directs his own action. The study was conducted on 300 boys and girls ranging from 6 to 11 years of age studying in missionary and vernacular schools. Fourteen moral values were selected to

know the pattern and developmental trend of moral knowledge. Knowledge for moral values was found to be increasing with increase in age. Only in the youngest age group (6-7 years), significant differential trend between boys and girls for their moral knowledge was observed. Children of first two age groups (6-7 and 8-9 years) presented differential in their knowledge as a result of schooling effect.

244 SRIVASTAVA D N: Substitution learning as a function of drive. Psychological Studies 1972, 17(1)), 68-71. 8 ref.

Thirty female postgraduate students (age, 19-23 years) were selected for the study. These subjects were divided into three groups - high drive group, low drive group and control group. Different instructions were given for producing low and high drive level but instructions for performance on substitution test were the same. The Substitution Test was administered to all the subjects. The results showed that 1) high drive level group was superior in learning performance than control group; 2) high drive level group and low drive level group did not differ significantly; 3) low drive level group was significantly superior in learning performance than control group. Results showed that drive plays an important role in learning performance.

245 VENKATESWARA R/O T, PAREEK U, PURUSHOTHAMAN S, GANGJEE Z: Patterns of adjustment of fifth grade children from Delhi, Coimbatore and Calcutta. Indian Educational Review 1972, 7(1), 91-113. 9 ref.

The sample comprised 1427 fifth grade children from Delhi, 558 children from South Delhi, 418 from Calcutta and 486 from Coimbatore. The tool used was the pre-Adolescent Adjustment Scale (Pareek et al, 1970). Significant differences were found between the adjustment patterns of the children from these cities. Although a general trend of moderately high adjustment was found among all subjects, children from Calcutta showed better adjustment than the children from Delhi, followed by the children from Coimbatore.

246 VIDU MOHAN, GUPTA V K: Effect of personality, induced motivation and frequency of K R on acquisition of efficiency in weight estimation. Indian Journal of Psychology 1972, 47(1), 29-37. 25 ref.

The effect of three variables, personality in terms of Eysenck's neuroticism and extraversion/introversion, induced motivation and two frequencies of KR, was observed on the task of estimating 40 gms of weight. Eighty school boys acted as the subjects.

A factorial design of 4x2x2 included 4 personality groups - neurotic extraverts, neurotic introverts, stable extraverts, and stable introverts, two levels of motivation, high and low, and two frequencies of KR, 50% and 100%. The results indicated a significant difference when frequency of KR was varied. The 100% group did better than 50% group; induced motivation did not yield any significant differences though high motivation group was consistently doing better. This low difference was explained as due to motivational effect of KR and interaction of induced motivation with neuroticism. Personality variables too failed to yield any significant difference. However, the combined effect of the three variables did produce significant difference. Thus the stable introverts with high motivation and with 100% KR performed the best.

EDUCATIONAL RESEARCH

247 SINGH R P: Areas of research in education and the question of fixing priorities. Education Quarterly 1971, 23(3), 14-18.

The need for research in education had been stressed. In fixing of priorities, the following criteria have to be kept in view: 1) maximum social advantage; 2) those topics of research and results of which will satisfy the maximal needs within particular areas; 3) taking into consideration the cultural ethos in which the research is going to be conducted; 4) examining the causes which motivate undertaking of a particular research; 5) the resources available for the research. It is pointed out that education cannot have areas of research independent of other disciplines. The following areas of research in education have been enumerated: a) educational theory, b) planning, c) curriculum, d) evaluation, e) administration, f) practical classroom problems. Research can be enumerated topic-wise also.

EDUCATIONAL SOCIOLOGY

248 ANANT S S: Education and social change, a study of educational differences in inter-caste attitudes. Indian Journal of Psychology 1972, 47(1), 65-75.

A random and stratified sample of 745 males was drawn from urban and rural areas in and around Delhi, Agra, and Varanasi. A multiple-choice questionnaire dealing with attitudes towards caste system, interaction with Harijans, and the privileges for scheduled castes was individually administered. The background information, i.e.

age, marital status, caste, education, occupation, income, etc. was obtained. The analysis of the data revealed significant educational differences. In general a positive relationship between liberalism and educational level was found. Among the educated, the majority belonged to the higher castes. Education, it appears, has a liberalising effect on attitudes except those concerning situations of deep personal involvement. Caste Hindus tended to differentiate between peripheral and core areas of inter-caste interaction conforming more to the law in the case of the former and to the traditional caste ideology in the latter case.

EXAMINATION AND EVALUATION

249 Better exams. [Editorial]. Amrita Bazar Patrika 14 June 1972, p.6, col. 1. 625 words.

Although many reforms have been suggested regarding examinations, no action has been taken by administrators to implement them. However, the West Bengal College and University Teachers' Association took action to create awareness in the public mind of the malpractices, corruption and incapacity associated with university examinations. The Association also appealed to the State Government to set up a Commission on Examination Reforms for all universities in the State with representatives of the Association and the UGC and other distinguished educationists as members. Instead of waiting for the Commission to publish its report, the Association could itself prepare a memorandum proposing reforms with the cooperation of educationists nominated by itself. This memorandum could be placed before the State Government and prompt decision and effective implementation be insisted upon.

250 HARPER Jr A E: Examinations - some practical hints. New Frontiers in Education 1972, 2(1), 50-67. 10 ref.

Suggestions for improving the examinations include the following points: 1) students should be informed about the advantages of the new tests and examinations and given practice in answering the questions before the final test is administered; 2) before framing a final question paper, an outline of the paper should be prepared keeping in view the objectives to be tested in relation to each curriculum item and an approximate weightage be assigned to each part of the outline; 3) the objectives should also determine the number of items to be included in a question paper; 4) the questions should indicate to the student what is clearly required to answer; 5) the answer sheet

could be marked by separating the concepts of raw scores and final marks; 6) short-answer tests should frequently be given in classrooms as they form an effective means of two way communication between teachers and students; 7) a file of test questions could be maintained by the examiner on small cards; 8) all the questions should be framed with a great deal of thought; 9) short-answer questions should consist of the questions of average difficulty; 10) more questions than required should be prepared and only the best selected for final test; 11) the traditional type questions should also be framed keeping in view the objectives of the course; 12) the essay answers could be corrected using a checklist indicating to each student his major faults.

251 HILL W H: Assessment and examinations. New Frontiers in Education 1972, 2(1), 40-9. 5 ref.

The major criticisms levelled against the traditional question papers have been listed as follows: 1) they concentrate heavily on testing the ability of students to reproduce memorised information; 2) the question paper for any subject covers only a small part of the subject; 3) very often the questions are not clearly stated; 4) the valuation of answer sheets is defective. The suggested improvements include the following points: 1) the objectives of teaching each subject should be decided and the questions be planned to test the achievement of the objectives; 2) the number of questions in a paper be increased to cover the subject and greater emphasis be laid on short answer objective questions; 3) paper setters be trained to write good essay type questions; 4) to achieve uniform valuation, the paper-setters should provide answers to short-answer questions and an outline of answers to essay type; 5) options in questions be reduced by permitting pupils to choose within pairs of questions of approximately equal difficulty; 6) the University should establish an examination unit, staffed by experts and conduct research on examinations; 7) the practice of distributing answer sheets to examiners by post be stopped and the examiners be asked to work together and value the papers at the university centre; 8) examinations be spaced to lead them on to more sustained study; 9) internal assessment should also find a place in the examination system; and 10) the marks assessed by internal and university examinations be scaled to a common standard before the final valuation is made.

252 MISRA V S: Follow-up study of examination reforms in the Gauhati University.' Indian Educational Review 1972, 7(1), 53-66. 10 ref.

The Gauhati University introduced certain reforms in its examination system. An attempt is made to find out to what extent these measures have improved the accuracy of examination marks. This has been investigated under two heads: chance errors, and constant errors. The study suggests that the chance errors are smaller in the reformed examination. Under the head 'constant errors' the influence of scaling has been studied and it is inferred that the examination reforms in the Gauhati University have improved the accuracy of marks. The limitations faced by researchers who attempt to investigate the influence of the examination reforms have also been discussed.

EXTRA-CURRICULAR ACTIVITIES

253 SINGH R P, SINGH B S P, MISHRA A P: Leisure-time activities of school going boys. Journal of Educational Research and Extension 1972, 8(3), 152-9. 6 ref.

The leisure-time activities of 150 students studying in classes VIII-XI, and belonging to three high schools of special Extension Block, Sabour in the State of Bihar were determined by asking them to check the activities applicable to them from a comprehensive list of different leisure-time activities. The parental socio-economic status and occupation were measured by the socio-economic scale developed by Trivedi and Pareek. The findings are listed below: 1) out of the respondents 45.3% had 1-2 hours, 32.6 per cent 3-4 hours and 10 per cent 7-8 hours of leisure available with them on each working day; 2) the availability of leisure-time did not depend upon the socio-economic status of the respondents; 3) as compared to high and medium socio-economic status groups, relatively larger percentage of the respondents from lower socio-economic group had more than 5 hours of leisure-time daily on working days; 4) both farming and non-farming boys had less than 4 hours leisure-time; however, the students of non-farming families had comparatively more leisure hours available with them; 5) reading course books, domestic work and playing were the three activities reported by the majority; 6) relatively a larger percentage of respondents from non-farming families devoted their time to domestic work, reading newspapers and talking with their friends.

FINANCE

254 BLESSED SINGH Y W: Are UGC grants usefully spent? Hindu 7 April 1972, p.8, cols. 4-8. 1600 words.

Some of the suggestions offered are: 1) retaining the present practice of the disbursal of UGC grants directly to the colleges; 2) removing the present anomaly in programmes like COSIP (Colleges Science Improvement Programme); 3) stepping up the provisions of academic and scholastic amenities and facilities, if necessary at the expense of further provision of physical amenities; 4) increasing the grants for games and sports and making sanctioning of the grants more flexible; 5) sanctioning more grants for women's colleges for humanities, social sciences and languages and restricting the grants for advanced science courses in women's colleges; 6) setting up a separate follow-up and tracing department to see that the grants are properly utilised; 7) coordinating the three sources of assistance to colleges, namely State grants, fee collections and UGC grants so that real needs are met with and schemes that do not merit the grant are not given effect to; 8) making selective admission at the lower levels of higher education and directing UGC grants mostly for advanced, doctoral and post-doctoral realms.

FORMS OF EDUCATION

255 Children out of school / Editorial /. Hindu 14 June 1972, p.8, col. 2. 400 words.

In keeping with the present tradition-ridden economic situation, the Union Education Ministry has proposed a new scheme of 'part-time' and 'own time' education as a temporary measure to tackle the problem of wastage at school. Under part-time education, mobile schools staffed by roving teachers and mobile laboratories equipped with films and radio instruction will educate children who cannot afford full time schooling under the own education scheme; provision will be made for self-instruction of rural girls at home through specilized workbooks. Apart from this, 'subschools' run by literate adults in the village are sought to be organized to cover hamlets with less than 300 population. However, it is pointed out that even such temporary arrangements cannot be put into practice immediately as they call for trained skills and sophisticated equipment.

256 Open university [Editorial]. Economic Times 15 May 1972, p.7, cols. 1, 2. 500 words.

Introduction of open university system in India has not been favoured in view of the vastness of the country and the absence of necessary material equipment and facilities. Instead, expansion and improvement of the already existent correspondence education, may be more realistic.

257 PANT N K: Correspondence education in India. Indian Journal of Adult Education 1972, 33(4), 13, 14, 16.

The success of correspondence courses in Delhi led to their establishment in various other universities also. The popularity of correspondence education in India is mainly due to the fact that it extends educational opportunities to all persons regardless of age, income and employment status. However, an obvious disadvantage is the absence of campus life and personal contact. In order to minimise this disadvantage, the School of Correspondence Courses, Delhi organizes contact classes every year through its Personal Contact Programme in Delhi, Madras, Trivandrum, Jaipur and Chandigarh, and also a regular programme of radio talks, as recommended by the Expert Committee on Correspondence Courses.

GUIDANCE AND COUNSELLING

258 SURJIT KAUR: Foundations of counselling and guidance. New Delhi, Sterling Publications, 1971. 151p. 247 ref.

Drawing upon the cultural heritage and ancient literature of India, a modern theory of counselling based upon Indian philosophy is put forward. The study seeks to identify and analyse philosophical, social, economic and educational factors for developing educational and vocational guidance services in keeping with the needs and resources of India. The study also aims at providing the needed background and theoretical frame-work to the educational planners and administrators. Guidance and counselling goals which can be achieved have been indicated. A review has been made of the relevant literature in the field.

259 THOMAS M: College counselling services, self-understanding and career choice. Social Action 1972, 22(2), 127-36.

It is shown how various types of counselling could be adapted to the needs of college students and also used by teachers as effective pedagogical tools. The emphasis is on vocational guidance which has a two-fold aim; to help the student form an accurate self-concept and to enlarge his knowledge of the occupational structure so that he may make his choice of a career realistically. The importance of vocational guidance is underlined because most of the students who come from the lower social strata and are unlikely to find 'work models' in their own families, tend to restrict their aspirations to narrow range of occupations. The author also offers some practical suggestions, based on experience for setting up a guidance and information service in educational institutions.

HEALTH CARE

260 Health of school children /Editorial/. Hindu 20 April 1972, p.6, col 2. 400 words.

The importance of medical check up of school children at regular intervals has been emphasised and a reference has been made to the health study conducted by a team of doctors in 36 schools near Stanley Hospital in Madras. It has been suggested that the mobile hospitals should tour the city schools and treat school children against epidemic diseases. A health card could also be maintained for each child indicating the record of treatment. The teeth, eyes and ears of children and their general condition should also be examined and malnutrition be compensated by including vitamin biscuits, milk, cod liver oil and fruit in mid-day meal programmes. The existing hospitals and dispensaries should cater to all primary children in the country. The health centres in Tamil Nadu covering only a few rural schools should include all the rural school children in the State under their system of inspection and treatment.

HIGHER EDUCATION

261 JOSHI K L: Need for junior colleges in India. Hitavada 2 April 1972, p. A, cols. 1-3; p. C, cols. 3-5. 2200 words.

The establishment of junior colleges in India has been favoured to deal with large masses of adolescent students who have left high school and who are not prepared for colleges and universities. These colleges would form a preparatory stage between high school and college/university education and provide a meaningful occupation to pupils according to their aptitudes. The heavy rush to university enrolments could also be avoided with the establishment of junior colleges. If the structure of education recommended by the Education Commission i.e. 10 plus 2 plus 3 years is to be adopted in India, the middle two years could be made junior college period. However, the Commission did not mention this device and made the higher secondary school a twelve year institution. Thus, the failure of higher secondary system has been due to inadequate facilities and unqualified teachers for the course of 11th year. Only 25% of the secondary schools in the country were converted into higher secondary pattern at the end of the III plan. Many of these conversions are purely national since adequate teachers, library and laboratory facilities were not provided to three-year integrated course in classes IX, X and XI. Besides, the intermediate colleges were converted to degree courses involving a great deal of expenditure and fall of standards. The junior college concept is now present in teacher's training institutes for primary school teachers, industrial trade schools, agricultural polytechnics, polytechnics etc., and the programme of these institutions could be brought under junior college pattern. The establishment of junior colleges between high school and the college in Indian educational structure would secure facilities for training manpower and overcome the problems of requirement of a large number of schools at the middle level.

262 NAIK J P: Higher education in India - some suggestions for reorganization. New Frontiers in Education 1972, 2(1), 6-21.

The vast expansion of university education has led to administrative problems in the university, deterioration of standards, student unrest and educated unemployment. The following programmes have been put forth to remedy the situation of high demand for and access to higher education: 1) the institutions such as university departments, colleges of agriculture, engineering and medicine and all colleges of arts, science, commerce and law which are functioning already on selective basis should be further strengthened to enable them to function in peace and to grow in a better manner; however, the interests of under-privileged social groups must be protected and a programme of scholarships be

developed to help the needy; 2) in the non-selective sectors the economic incentives which artificially heighten the demand for higher education should be reduced; 3) standards in undergraduate affiliated colleges should be maintained through prescription of proper conditions of affiliation and their rigorous enforcement, and through development of correspondence courses on a large scale; 4) the compulsory subsidy be delinked from public funds to mere expansion of facilities at the undergraduate stage and fee-grants be provided to students on principles of merit and social justice. The following suggestions have been given for reorganising the structure of higher education: a) the universities should restrict their work mainly to post-graduate teaching and research; however, for the purpose of producing top level talent needed for universities, research etc., Centres of Advanced Study should have an undergraduate section of annual intake of not more than 20-30, selected on a national basis and supported by scholarships; b) Boards of Collegiate Education for metropolitan cities and separately for each State, created by Acts of State/ Central Legislature, and consisting of representatives of all universities in a State, the affiliated colleges, and the State Government, be established to assume responsibility for affiliated colleges; these Boards should be empowered to grant affiliation to colleges, to prescribe curricula, and to hold the first Degree examination; c) Autonomous colleges should be created on a large and effective scale; these colleges should be given an option to affiliate to a university or to remain with the Boards; d) research institutes devoted to research and having doctoral programmes of high selectivity should be established. The suggestions for improving the content and techniques of teaching of higher education are mentioned below: 1) the curricula should be revised and upgraded on principles of relevance and significance, and dynamic methods of teaching and evaluation should be adopted; ii) the UGC programmes of summer institutes should be stepped up and an intensive large-scale teacher preparation programme be launched; special programmes of student aid such as textbook libraries, guidance and health services, games, sports and national services be promoted.

263 Problems of numbers [Editorial]. National Herald 3 June 1972, p. 5, cols. 1,2. 1000 words.

The UGC report for 1970-71 records that the enrolment in colleges during 1970-71 has exceeded 3 million and that there has been a rapid expansion of colleges and teaching staff. This only suggests that the glamour of higher education has remained unaffected by the frustration caused due to educated unemployment. The Education Commission favoured selective admissions so as to relate enrolments to facilities available and to prospects of manpower needs. Though admissions to colleges have been restricted to certain extent they are not justified as the students who could pay for higher education

have got it and the talented have been barred by social or economic handicaps. So, special efforts are to be made to draw able students into colleges and leave out those who can pay for higher education but cannot profit by it. The numbers in each college or university are important, as smaller the university or university department, the better is education provided in it and the better also is the functioning of the self administration system. Thus, the planners in Western countries prefer building new universities instead of expanding old ones.

HIGHER TECHNICAL AND VOCATIONAL EDUCATION

264 ARORA P D: Training in computer programming. Indian Educational Review 1972, 7(1), 209-18.

Highlights the important features of the course in programming at the Government of India Computer Centre, New Delhi, such as the syllabus, methods of teaching, the place of quizzes and tests in training and practical computer operations. The utility of a constant dialogue in effecting improvements in educational standards is also brought out.

265 MONTEIRO L, KUMARAIAH V, SHARMA K N, ADISESHAIAH W T V: Opportunities for the development of medical skills, a study in retrospect. New Frontiers in Education 1971, 1(3), 326-33.

A study was conducted among 103 final year medical students of St. John's Medical College, Bangalore in order to find out the opportunities provided to students for the development of necessary skills. The findings of the study are: 1) hardly any opportunity was provided for the performance of complex and delicate tasks; 2) clinical experience in the hospital was not adequate; there is need for closer link-up between students and hospital staff; 3) students' personal contact with patients is very important and this should be provided right from the first year; 4) facilities should be afforded to students to accompany experienced medical practitioners when they visit patients in their homes; 5) students should have some experience of the techniques of fact-finding for which scope should be provided by research projects in areas such as social and preventive medicine; 6) there is need for tutorial assistance and counselling facilities.

HISTORY

266 **JOEL B S:** Development of education in British India 1905-1929. New Delhi, Central Institute of Education, National Council of Educational Research and Training, 1969. v, 108p. 38 ref.

This work was accepted for the Degree of Ph.D. of the University of Delhi, 1968. This is an attempt to survey the development of education in British India in the context of socio-economic movements in the country. Topics dealt with are as under: 1) political events; 2) economic order and education; 3) socio-cultural changes and education; 4) primary education; 5) secondary education; 6) university education. The following are some of the conclusions drawn: 1) whenever some conflicts occurred between nationalist elements and the Government in which education was also involved directly a) there arose tendencies for new experiments in education, b) the educational aspirations of the people received a fillip; 2) during this period, political communalism influenced education increasingly replacing cultural and religious communalism of the earlier period; 3) the main hurdles in the expansion of education were poor enrolment figures and wastage and not lack of finance and non-provision of schools; 4) formal education had little connection with industry or agriculture of the country; 5) as a result of increasing tempo of social changes, people of all castes were showing distinct progress in education; 6) there was a growing tendency in universities to become autonomous.

INSTRUCTIONAL MATERIAL AND AIDS

267 **ADISESHIAH M S:** Books for all, their function as pioneers for national action. Education Quarterly 1972, 23(4), 1-4.

The following functions of books have been discussed and appropriate suggestions made: 1) the book is the means and the tool of education at all levels; hence, the authorities at all levels from the Centre to the Panchayat should provide adequate funds in every education budget for the purchase of books for students and adults; 2) the book serves the special interests of children, becoming an essential part of their life and existence; the development of children's books in the country calls for active promotional programmes to develop the creativity of authors and artists and constitutes a major field for international cooperation; 3) the book is the instrument for the economic growth of the country; there should be a crash programme during the seventies for increasing rapidly the supply and availability of scientific and technical books; this will involve

increasing local production in this area from 10 to 30 per cent and doubling the volume imported; 4) the book is a repository and means of preservation and dissemination of the Indian pluralistic cultural heritage. Efforts should be made to return to the great cultural tradition which Indian books represent and to promote in every way the publication of books embodying and explaining that tradition.

268 DUA M R: University level books. Education Quarterly 1972, 23(4), 8-10.

Being one of the largest educational systems in the world, it is a phenomenal task to make available textbooks needed in all disciplines at a reasonable cost. The task is made more difficult by the decision (a right one) to replace English, as the medium of instruction, by regional languages. The scheme of producing university level books in Indian languages, initiated in 1968-69, has taken rapid strides. To begin with, the Union Ministry of Education provided guidelines for the formulation of the State programmes for the production of university level books in various Indian languages. A number of States have instituted autonomous organizations for the purpose. Translation of works in various disciplines is handled by various universities. The national programme of core books, which envisages production of core books written by eminent Indian writers on various subjects, has been launched. The Indian Government has also entered into an arrangement with a number of foreign countries for translation of university level books. Another scheme of subsidised publication of university level books is in English.

269 GUPTA M D: Literacy and the publishing house. Education Quarterly 1972, 23(4), 20-4.

Books are essential to spread literacy and to sustain it. Side by side the book publishing will flourish with the spread of literacy. Publishing industry in any developing country should align itself with the objectives and national aspirations of that country. Book production to help achieve universal literacy should take into account the multilingual character of India and secondly the cost of production should be kept to the minimum. A single national-level publishing organization can be set up to produce literature for literacy in all major languages. That such an organization can work successfully from the point of view of sheer economic returns has been explained. The programmes that should be undertaken by the publishing organization, the anticipated demand for the literacy books in the country, and the economics of the programme have been detailed.

270 Textbook muddle /Editorial/. Mail 21 June 1972, p.4, cols. 1, 2. 450 words.

The undue haste with which some universities switched over to the regional language as the medium of instruction at the instance of politicians without adequate preparation has been criticised. In spite of the Centre's grant of about Rs.8 crores for the production of college books in regional languages, shortage of textbooks has been the main problem the students face throughout the year. Some States are already having second thoughts about the whole scheme. The Union Education Ministry has therefore rightly called for an open discussion on the subject. Unless the educational pattern acquires stability, the centrally financed textbook production will suffer a set back. The problem of textbooks cannot be eased without liberalizing the rules for printing foreign books in India even if it conflicts with the policy of encouraging Indian industry and talent.

MORAL EDUCATION

271 SUBRAMANYAM G: Religious and moral instruction. Educational Forum 1971, 16(3-4), 31-6.

A formal religious and moral instruction in schools would help students develop a healthy attitude towards truth, beauty and goodness in their absolute form. It is again only the school with its cosmopolitan character that can give a scientific and objective view of things and help the young people to become conscious of the religious interpretation of life. Every school and college should create an atmosphere of religious devotion to duty so that religion is lived at school and not merely talked about. The subject should also be given an important place in the curriculum and examination as well. Teacher training colleges should offer this subject at the degree level as one of the branches of special study.

PHYSICAL EDUCATION

272 GOVINDAN T S, PAVANSAM R: Study of physical efficiency of some highschool students. Journal of Educational Research and Extension 1972, 8(3), 176-8.

The study is aimed at finding out the physical efficiency of 200 boys and 200 girls (age group 14-17), belonging to rural, urban, mixed and separate high schools in and around Coimbatore city. Tests of speed, strength, agility, endurance, and

neuromuscular bodily coordination were given to the sample. The findings revealed that 73.25% of the sample had no encouragement from their parents for sports and only 46% played games daily. The recommendations include: 1) planning of syllabus on physical education and methods of testing physical efficiency of pupils once in a quarter; 2) providing play ground facilities to rural schools; 3) supplying books and magazines on sports to pupils; 4) raising the physical education teacher pupil ratio; and 5) prescribing physical efficiency tests as examination subjects. The tests adopted in this study have also been recommended for total adoption in schools.

273 GUPTA V P: Performance in physical education, physical fitness and personality characteristics as measured by 16 PFI. Journal of Educational Research and Extension 1972, 8(4), 217-21. 7 ref.

The aim of the study was to find out the effect of personality characteristics and physical fitness on achievement. A group of 100 male students of age group 21-23, studying in different courses of physical education in Punjab Government College of Physical Education, Patiala formed the sample. Sixteen Personality Factor Inventory of Cattel et al which was adopted in Hindi and standardized by Jalota and Kapoor, Basic Fitness Battery of Edwin A Fleishman were administered to the sample to find out the personality characteristics and physical fitness respectively. The marks obtained by the subjects in the training courses of physical education examinations were taken as the index of achievement. Analysis of the data revealed the following findings: 1) the subjects who were more cooperative, adaptable, sociable, cultured, intellectual, dominant, competitive, self-assured, independent minded, introverted, self-absorbed, imaginative, creative, cheerful, exact, emotionally disciplined, possibly insecure, controlled, exacting will power and physically fit showed better achievement than those who were less on the above characteristics; 2) subjects who were less adventurous, overt, interested in opposite sex, carefree, sensitive, anxious, imaginative in inner life and in conversation, jealous, suspicious, brooding, irritable, informed, inclined to experiment with problem solutions, tense and excitable had more achievement than those who were high on the above mentioned characteristics; and 3) non-intellectual characteristics and environmental conditions have influence on the academic performance of individuals.

274 Education for all children [Editorial]. Hindu 17 May 1972, p.6, col. 2. 600 words.

It has been pleaded that efforts should be made to reduce the number of drop outs in primary and secondary schools for the successful implementation of free and compulsory education for all children of age group 11-14 years. Thus, education should be oriented towards vocations and made suitable to local environment. The Union Minister, Mr. Nurul Hasan proposed the following: 1) community schools should be established and quality of education improved; 2) part-time education be imparted to children (age group 11-14) who are unable to afford full time education; 3) the extra staff needed for teaching be made available by enlisting the services of volunteers from social welfare and youth clubs; 4) vocational skills be imparted by village artisans without insisting on a certificate for a particular type of teaching. However, on reviewing the above proposals, it has been contended that there would not be sufficient volunteers to undertake the task, and that unskilled workers would also be appointed by alleging that they have requisite working knowledge.

275 Education policy adrift [Editorial]. Hindustan Times 11 April 1972, p.7, cols. 1, 2. 400 words.

The Government's decision against the establishment of a separate university in South Delhi has been criticised. Though Jawaharlal Nehru University has been established in South Delhi it is not the kind of university envisaged when the idea of second campus was mooted. The Ministry should not plead the impossibility of instituting a second University at South Delhi and an alternative should be arranged to cater to large enrolments in Delhi University. At present, a policy on higher education related to economic and social perspectives need be taken. Suggestions have been made to vocationalise courses for school leavers in order to reduce university enrolments. Further there is need to waive the Bachelor's degree as a minimum requirement for employment in areas where such a degree is not needed and where technical and professional competence would prove more useful. These schemes should be tried and the present drift should be altered.

276 MEHROTRA S N: Institutional planning at college level. New Frontiers in Education 1972, 2(1), 68-78. 7 ref.

The main defect in the Indian educational planning is that it is top-based and the major reform needed is to broad-base and decentralise it through the preparation of plans at the institutional level and supplement them at the district, university, state and national levels. Such a system would encourage initiative, freedom, and creativity of the individual teacher, make good teachers effective, secure their participation in the educational planning process and ensure maximum utilisation of available facilities and resources of educational institutions. Thus, each institution need to formulate its plan of development to meet its own specific needs and requirements. The planning group of each institution should consist of the principal as the chairman; heads of departments, teachers, parents, alumni, students, librarian etc. should be nominated by the principal from the committee. The main functions of the group are: 1) stating the institutional objectives in specific terms and formulating a detailed and a comprehensive plan that projects the growth of the institution into future years; 2) organising the institution keeping in view the specific objectives; 3) considering the estimated enrolment predictions for the present and future years; 4) formulating an admission policy and setting up educational standards; 5) analysing the sources and uses of the funds critically in terms of projects, programmes and activities to be implemented; 6) stating the policies regarding the selection and appointment of teaching staff, their conditions of service, provision of facilities for raising their professional competence; 7) planning and organising a library keeping in view the resources, the use of those resources by teachers and students; 8) planning student welfare committees, guidance and counselling bureaux; 9) inquiring if the courses of post-graduate instruction in the institution is supporting research activities; 10) reviewing the maintenance of the physical plant of the institution; and 11) evaluating the effectiveness of the plan.

277 _ Primary, secondary education pattern to be overhauled. /News Item/. Hindustan Times 6 May 1972, p.1, cols. 7, 8; p.10, col. 2. 600 words.

Inaugurating the Education Secretaries Conference at Delhi in May, Mr. Nurul Hasan, the Union Minister of Education stressed the need for changing the pattern of education in primary and secondary schools and eradicating illiteracy. The new educational pattern would secure 100% enrolment of children in the 6-14 age group, combine manual work with academic training and establish one model community school in each development block and one model comprehensive secondary school in each district to act as

demonstration centres and to set the pattern for other schools. The proposed community schools would provide for multiple entries at several points and also part time education as well as private study. The distinctive features of these community schools are the expansion of student body, expansion of staff and transformation of content. The model school would also provide extension services to neighbouring schools and offer circulating library and mobile laboratory services. The Minister also pointed out that the training institutions should be reoriented to meet the new programmes.

PRE-PRIMARY EDUCATION

278 RAJAMMAL DEVADAS: Development of pre-school children. Journal of Educational Research and Extension 1972, 8(4), 206-10.

Describes the recommendations of the report of the Study Group set up under the Chairmanship of Smt. Mina Swaminathan, by the Ministry of Education and Social Welfare, Department of Social Welfare on the recommendation of the Central Advisory Board of Education. The major recommendations are given as follows: 1) the integrated service covering education, health, nutrition and welfare to the pre-school child, now covering about one million children should be rapidly expanded to cover 2 million by the end of the Fourth Plan, and 5 million children of age group 3-5 by 1981; 2) a variety of operational models should be developed to suit local conditions; 3) workers of different categories required for the programme should be trained; 4) teaching material and other necessary material should be manufactured on an adequate scale and the needed guidance and supervisory services should be created; and 5) the resources of local communities in personnel, materials and funds should be fully harnessed.

PRIMARY EDUCATION

279 Primary education and literacy [Editorial]. National Herald 11 April 1972, p.5, cols. 1,2. 700 words.

Though the enrolment to primary and middle schools has grown in rapid pace during 1947-72, the percentage of literacy has increased only by 15. The number of illiterates is growing faster than the number of literates. Many who leave primary schools and the dropouts lapse into illiteracy fairly soon. Modernising the primary school curriculum and bringing education

closer to the realities of rural life have been suggested for sustaining interest towards literacy among primary school children. Mr. Nurul Hasan, the Union Minister of Education has suggested the work oriented primary education and the association of practitioners of local or regional arts and crafts with primary schools so as to enable children to accept schools as an extension of home and not an alien imposition. He advocated that colleges and universities could adopt a few elementary and middle schools in their neighbourhood and allow the college and university students to teach. The Minister also recommended a multi-point entry to pupils of age group 6-17 for joining primary schools and getting formal education at any point of time. They would be admitted even as part-time students and be helped to learn the basic skills and become functionally literate. This system combined with adult education programmes could reduce mass illiteracy considerably.

280 Speeding up primary education [Editorial]. Searchlight 9 June 1972, p.4, cols. 2, 3. 600 words.

The new educational strategy of the Government for expansion of primary education lays emphasis on 'part-time, own time education' and use of radio and television. However, these new tools and techniques cannot reduce the importance of the traditional teacher instruction to the pupils on a personal level. A cent per cent enrolment of children in effective school education can be envisaged only if a really impressive investment is made in education and many more schools are opened.

281 UNIVERSITY OF DELHI, AGRICULTURAL ECONOMICS RESEARCH CENTRE. Primary education in rural India - participation and wastage. Bombay, Tata McGraw-Hill, 1971. 86p. 29 ref.

Contains findings of research undertaken at the Agricultural Economics Research Centre at Delhi University, for one year beginning, May 1967. Chapter I studies the general problem of information on rural elementary education in India, especially in the light of conflicting evidence from different sources. An attempt is made to judge the relative worth of different sources of information as well as to identify the nature of the problem of backwardness in elementary education in the Indian rural economy. One of the important aspects of this backwardness is the question of drop-outs and wastage in rural schools. This problem is stated in Chapter II and analysed, in terms of different hypotheses, in Chapters II-V. Chapter VI presents the conclusion and the Appendix clarifies the use of the retention index in cross-section and time-series data. Some clear-cut policy recommendations are summarized in Chapter VI along with the major conclusions.

READING

282 BAGGA Q L: Importance of reading skills. NIE Journal 1971, 6(2), 16-20.

In view of the rapid change and expansion in knowledge, it has been pointed out that the three aims in teaching reading should be - self-reliance in study, a desire for information and the establishing of a life-long zest for learning. The importance of correct eye movements in increasing reading speed has been underlined. The teacher should first ensure the elimination of the common bad habits which interfere with fluency in reading like using extrabody movements in the reading process, pointing to the words with a finger or pencil, moving the head from side to side, vocalizing, and inspecting each word syllable by syllable or even letter by letter. Then only the reader gets ready for the practice aimed at speeding up his reading.

SCHOOL FORMS

283 CHILANA M R: Primary school without grade or class distinctions. Quest in Education 1972, 9(2), 91-107.

A critical analysis is made of some major issues involved in trying out an ungraded pattern. The objectives of 'ungraded pattern' as envisaged by the Kothari Commission, include not only checking wastage and stagnation, but also providing individual attention to the child and making provision for his continuous and uninterrupted growth. Conceptually, the system seeks to abolish artificiality of class system, lessons, problems arising from failure of children, caters to individual differences and advocates flexibility in instructional programme. The introduction of the system requires curriculum adjustments, preparation of teachers, and diagnostic and remedial material to facilitate grouping and periodic evaluation. Strategically, the Commission recommends its first try out in classes I and II to be extended to classes III and IV later on. The concept of the 'ungraded system' as understood by foreign educators has been discussed. Why 'ungraded pattern', its significant features, the requirements for introduction of the programme, and the strategy to be adopted have been explained.

284 Community schools [Editorial]. Tribune 6 May 1972, p.4, cols. 1, 2. 800 words.

Conversion of all primary and middle schools in the country into community schools which will provide multiple entries at several points has been suggested by Mr Nurul Hasan, Union Minister of Education to meet the stupendous challenge of raising the enrolment in the age-groups 6-11 and 11-14 to 10 crores and 5 crores respectively, by 1981. The Minister also suggested the following- introduction of work-experience, social service and better teaching of languages, mathematics and science, establishment of at least one-model primary school in each community block and one model comprehensive secondary school in each district, to begin with, and introduction of the double shift system everywhere as in Kerala. The type of educational explosion visualized by Mr Hasan could give rise to unpredictable social and political tension, but there is no other alternative as the dangers of not educating the illiterates are far more serious.

285 JUNGLEE: Public schools or private preserves? Patriot 12 April 1972, p.2, cols. 4-7. 1300 words.

The continued existence of public schools which are out of date and exclusive institutions of the rich has been contended as anachronistic in the present educational system. The Government's decision to send Government of India Merit Scholars to these institutions has been characterized as a vain bid to silence the public criticism.

SECONDARY EDUCATION

286 LOUIS M J, SOUNDARARAJA RAO T R: Evaluation of the educational programme in the technical high schools and the secondary schools. Journal of Educational Research and Extension 1972, 8(4), 241-5.

The evaluation was based on the study of the curricula and the programme of work of two technical high schools and two secondary schools in Tamil Nadu. Case study method was adopted and a comparative study of the curriculum, school plant, teacher and pupil development was made to study the similarities and the differences between the two programmes. The main findings and recommendations have been presented as follows: 1) the excellent libraries of the technical high schools are not made proper use of; a library work period in the time table would enable pupils to make better use of the library; 2) the very good laboratories of the technical high schools are not made proper use of; provision

for a separate laboratory for the technical schools within the premises would induce pupils and teachers to benefit by the laboratories; 3) technical high school educational programme should provide for physical and moral education within the curriculum; 4) the aims and objectives of the secondary school programmes are not clear and specific; so, the curriculum should be changed and based on specific aims and objectives related to life; 5) work experience is not provided to the secondary school pupils; productive work experience provided for diversified courses should be made available for all pupils entering the secondary school; craft work should be enriched and extended to all classes.

SOCIAL EDUCATION

287 DHAR N: Fundamentals of social education. Calcutta, Minerva Associates, 1971, viii, 198p.

Discusses principles and practices of social education as applicable in Indian society. The book is divided into four parts: 1) concepts; 2) content; 3) agencies; 4) methods and techniques. Appendices contain a) social education in ancient Greece; b) social education in Rome; c) approved syllabus for People's College, West Bengal.

STUDENT INDISCIPLINE

288 SHAMSUDDIN: Student indiscipline. NIE Journal 1971, 6(2), 21-4.

The following suggestions have been made for eradicating student indiscipline: 1) improving the social status of teachers and the academic atmosphere, and increasing the emoluments of teachers at all levels; 2) making adequate arrangements for refresher courses and inservice education for all teachers; 3) improving the economic conditions of students by offering merit scholarships and providing tiffin and school uniforms, free of cost; 4) establishing residential institutions where each teacher should be in charge of a set of pupils; 5) restructuring secondary education in the light of suggestions made by the Kothari Commission, the University Grants Commission and the Secondary Education Commission; 6) introducing dynamic methods of teaching, tutorials, seminars etc.; 7) discouraging the emphasis on degree as a qualification for securing employment.

STUDENT PROBLEMS

289 SHIPSTONE E I: Educating the Indian adolescent. Social Action 1972, 22(1), 26-38.

The problems and tensions experienced by the adolescents in urban society have been attributed to the changes taking place in the traditional structure of the Indian family. The need for 1) establishing proper home environment; 2) conducting guidance sessions between the adolescents, parents, and teachers; 3) establishing counselling bureaus in schools; 4) providing value-oriented education to youth; 5) training teachers in guidance techniques through short-term condensed courses-cum-workshops; 6) offering health education and marriage counselling to youth through youth services; 7) encouraging student welfare service in schools and colleges has been stressed to help the adolescent to adjust to the demands, and for personal and social maturity.

290 UMAMAHESAN P: Student welfare work in higher education. Kerala Journal of Education 1971, 3(1,2), 19-21.

The need for student personnel services in higher education for facilitating an environment that would aid the all-round growth of students has been stressed. Various activities of student personnel work and the important problems existing in Indian higher education have been listed. An organised student personnel programme would help the students to solve many of their problems. Trained personnel and educated workers committed to the improvement of student welfare, educators trained in the art and science of student personnel work, cooperation of parents and teachers in the activities are essential to organise the student welfare work. Psychological tests for clinical counselling and guidance should be developed by the university departments of psychology and education.

TEACHER EDUCATION

291 BHATT C S: Qualitative improvement in elementary education and refresher training centres in Rajasthan. Naya Shikshak (Teacher Today) 1972, 14(3), 62-73. 4 ref.

In-service education of teachers is one of the most important ways to improve the quality of education. The efforts in this regard made by the Rajasthan State Government have been detailed. The working of the refresher training centres established in the State has been described.

292 DEVARAJ O K, PAVANASAM R: Inservice educational needs of secondary school teachers in Coimbatore District. Journal of Educational Research and Extension 1972, 8(4), 246-8.

Responses of 384 teachers of 53 schools in Coimbatore District to a questionnaire and checklists designed to elicit personal data, the period of inservice training undergone, the views on the aims and objectives of inservice training, reactions to various types of programmes and suggestions for the future inservice programmes were obtained and analysed. The findings are as follows: 1) of 384 teachers, 145 had not attended inservice training courses, 99 attended only once and 140, more than once; 2) the first seven inservice activities preferred were seminar, workshop, courses, audio-visual services, conference, examination reform and educational and vocational guidance and the least preferred activities were library institute, language teaching, adult literacy education, etc.; 3) extension and education departments, training colleges, the NCERT and the UGC, the National Educational Development Council and Literacy House were the agencies which conducted the inservice training; 4) most of the teachers preferred seminars as the means of inservice training programme for teachers; 5) summer holidays were considered as the best period for the inservice education; 6) professors and lecturers from training colleges were preferred as suitable staff to conduct the training; 7) headmasters were preferred for supervising the follow-up work undertaken by the teachers who had undergone the inservice training; 8) for the follow-up work, the majority preferred changing the methods according to the classroom situation and facilities available in the schools; 9) issue of merit certificates at the end of the programme and linking inservice education with promotion to higher positions were preferred; 10) highest priority was given by a majority for the inservice education in the teaching of languages.

293 GOSWAMI H G: Prāśikṣaṇ mein abhyās adhyāpan (= practice teaching in teacher training) [Hindi]. Naya Shikshak (Teacher Today) 1972, 14(3), 29-37. 6 ref.

The theory part of training, which ought to subserve the interests of practice-teaching, continues to enjoy an undue importance. The need is to so re-model and arrange the two components of training as to make theory contribute to the professional efficiency of the teacher who is above all a practical field worker. To realise this, there has to be perfect coordination among the different factors of training: the mode of practice-teaching, the University, Training Colleges, trainees and the practicing schools. Trainees should function like full-fledged staff-members and participate in all activities of the practicing school. The training college should strike deeper roots in the school soil. Full participation in school life may begin in July and end by October or November so as to leave ample time for other syllabus-items. During this period a trainee should teach for four periods daily. Homework should be taken

seriously and not as a formal training routine. If adopted, the system will benefit the trainees, the school teachers and the students alike. There will be plenty of scope for experiment and action research, which can instil a new life in teaching and training and inform them with a new purpose.

294 HARIDAS M: Teacher educators in a changing society. Kerala Journal of Education 1972, 4(1), 25-8.

The role of teacher-educators in the present Indian society has been described as follows: 1) the teacher educator and school teacher should possess a capacity for adjustment to the new trends of the changing society; he should encourage collective thinking and cooperative working in place of hierarchy and individual competitions; 2) the teacher-educators and administrators should frame the curriculum keeping in view the sharing of responsibilities between teachers and pupils in the learning process and the individual initiative of pupils in accordance with their needs and abilities; 3) the teacher educators should locate the talented teachers among the trainees and refer them to the State Institute of Education and the NCERT for recognition and necessary encouragement.

295 MAITREE KRISHNARAJ: How trainee-teachers reacted to programme in Gandhi Shikshan Bhavan - an assessment. Quest in Education 1972, 9(2), 67-84.

A questionnaire consisting of open-ended as well as closed items was administered to 64 B.Ed. students of 1971-72 session at the end of their course. A detailed analysis of the responses has been presented. The human relations aspect, training received in teaching techniques, the study of educational psychology, and lectures by eminent men impressed a good number of students. The value of discussions and practice-teaching was also realized by a large number of students. Most of the students developed interest in the profession and in their own professional growth. They also developed a positive and progressive outlook to school education. The importance of moral values in personal and professional life was realized by the majority. The usefulness of current educational journals was, however, not realized. The programmes like work-experience and social service which needed improvement did not create much enthusiasm.

296 MATHUR V S: Kurukshetra experiment. NIE Journal 1971, 6(1), 38-40.

The integrated courses in education (preparing teachers in content matter and methodology simultaneously) have been first

started in India by the Kurukshetra University in July 1960. The four Regional Colleges of Education started by the NCERT are also giving such courses. From various studies it has been observed that these courses were found to be successful. The following suggestions are given: 1) the integrated courses should be continued; 2) while the duration of the course may be four years for higher secondary passed candidates, it should be of five years for matriculates; 3) there should be more opportunity for seminars, library and discussion activities; 4) scholarship amount should be increased to Rs.50/- per month; 5) students should be exposed to the subject of education in an informal way in the first two years; in the third year 'principles of education may be introduced; educational psychology may be introduced in the fourth year; 6) the fifth year should be devoted to educational work including practical work and teaching practice.

297 PILLAI N P: Education of the teacher as a professional. Kerala Journal of Education 1971, 3(1,2), 5-9.

The education of a teacher for effective teaching involves his preparation as a person, a professional, a community leader and an agent in promoting social change. The education of the teacher as a good man should be accomplished through the general or liberal education courses he undertakes at school and college. As a professional the teacher should possess subject matter competency and communication competency. He should also possess a knowledge of i) the psychology of child development and human behaviour, ii) the theories of learning, the techniques and procedures of instruction, class organisation and management, the use of instructional aids and media etc., iii) the motivations and constraints in the field of education in the country, and iv) the methods of educational research and school organizations.

298 RAGHURAM SINGH M: Collegiate faculty development. Education Quarterly 1971, 23(3), 23-6.

It is suggested that collegiate and university teachers, especially those handling undergraduate teaching need to take up a teacher-preparation course to be considered professionals. When they are appointed on a faculty they should dedicate themselves to the six obligations of an educator: a) continuing education for self, b) communication with students, c) advancement of knowledge, d) maintenance of professional staturd, e) helping administration, f) display of competence. The teachers should be alive to the concept of faculty development and should fight against obsolescence in teaching as they grow in age, The six dimensions of teaching fall into three categories: 1) objectives, 2) achievement of objectives, 3) research and development functions. The teachers should be familiar with these.

They should prepare themselves to be assessed for professional competence by course students, faculty colleagues and educational administrators. They should aspire to go up in the professional ladder purely on the basis of the measurable evidence they have built regarding their worth. Teacher-evaluation techniques should be developed as feed-back devices for the collegiate faculty development programme.

299 SADASIVAN NAIR V, KULANDAIVEL K: Evaluation of the B.T. programme by trained graduate teachers. Journal of Educational Research and Extension 1972, 8(3), 188-90.

A sample of 200 trained graduate teachers working in rural and urban high schools in Coimbatore Educational District was administered a questionnaire containing 113 questions for eliciting personal data, opinions on general aspects of B.T. programme, teaching of theoretical subjects and practical work. The findings are as follows: 1) out of the sample, 11% and 8.5% reported lack of well equipped library and laboratory facilities in the training colleges; 2) M.Ed. degree was considered essential for all staff members of training colleges by 74.5% of the sample; 3) that teacher educators should take aptitude tests before joining the profession was felt by 20.5%; 4) about 38% considered that experiments should be conducted in educational psychology; 5) guidance service wing attached to the department of psychology was desired by 80%; 6) demonstration lessons were found useful by 92% in their work; 7) the entire sample stated that each trainee should be asked to give criticism lessons. Appropriate recommendations based on the above-mentioned findings have been made.

300 SIVADASAN PILLAI K: First Asian Conference on teacher education. Kerala Journal of Education 1971, 3(1,2), 10-12.

The conference held at Bangalore from 14th to 19th of June 1971 under the auspices of the International Council on Education for Teaching, the Indian Association of Teacher Educators, the Bangalore Association of Teacher Educators, and the Bangalore University, adopted the following resolutions: 1) a survey of teacher education institutions in various countries be undertaken; 2) effective steps be taken by the Government and professional organisations to provide suitable emoluments to teachers and to improve their working conditions so that only suitable persons are attracted to the teaching professions; 3) an expert committee be appointed for making suitable recommendations, suggesting reforms in teacher education in regard to curricula, instructional methods, evaluation etc.; 4) greater stress be laid on functional and developmental research in teacher education; 5) Summer Institute and inservice courses be organised for teacher educators.

301 SUKUMARAN NAIR A: New challenge to teacher education - modern mathematics. Kerala Journal of Education 1972, 4(1), 60-3. 5 ref.

Describes the concept of modern Mathematics and stresses the importance of including modern Mathematics in the school curricula. A suggestion has been made that the demonstration schools attached to teacher training institutions should start experimenting with modern Mathematics and evolve suitable curricula. Resource persons for training teacher-trainees should be secured and theory and practice of modern Mathematics should be included in the methodology courses of teacher training institutions.

TEACHERS

302 BRAR J S, OM ADHAR: Socio-economic problems of primary school teachers. Journal of Educational Research and Extension 1972, 8(4), 222-5. 2 ref.

The socio-economic problems of 60 male and 19 female teachers belonging to 33 primary schools in Pachmarhi range were studied through a questionnaire and an interview schedule. The findings are: 1) the maximum expansion of primary schools and teacher recruitment have taken place after independence; 2) 79% of the teachers are undergraduates and 65% are trained; 3) the percentage of women teachers joining the profession forced by circumstances is larger than the men teachers; 4) a sizable majority are Hindus followed by Muslims; 5) half of the teachers (56.5%) have small families; 50% of the married teachers are forced by circumstances to live separate from their families and female married teachers have more domestic problems than the rest; 6) the low salary of teachers has created a general apathy of teachers towards the people; 7) many of the teachers do not enjoy good housing, quality clothing, educational travels and recreation; 8) barely 15% of the teachers have insurance policies; 9) unconfirmed teachers do not have the benefit of provident fund and this adds to their economic difficulties; 10) very few have a liking for the profession and most have joined because they were forced by circumstances; and 11) bleak chances of promotion have led to the professional inefficiency.

303 JAIN A K: Adhyāpan kārya kī svamulyānkan vidhi (= self-evaluation of a teacher's work) [Hindi]. Naya Shikshak (Teacher Today) 1972, 14(3), 24-8.

Evaluation has its own importance in the field of education as it is the only dependable means of knowing the failure or success of a teacher's work. According to the tradition, confidential reports were drawn on the basis of a teacher's exam results; but of late such items as a teacher's participation in extra-, co-curricular activities and social work also began to find a place in them. In advanced countries students express their views and give their judgements on the work of their teachers. A few universities have adopted this method in India also. This method unquestionably helps in the promotion of democratic values. Since its working demands special responsibility on the part of students, its introduction in India must take place after full thought. There is yet another method; the so-called 'self-evaluation' method. As the name shows, here evaluation is done by the teachers themselves through suitable questionnaire, interviews and the like. Various aspects of a teacher's professional life and work - quality of his teaching and reading, his qualifications, participation in various activities, research work, publications etc. can be evaluated through these devices. This method can create a sense of self-confidence in teachers and enable them to improve the quality of their work. Such a questionnaire has been devised.

304 SHAMSUDDIN: Socio-economic conditions of teachers, their impact on choice of career. Education Quarterly 1971, 23(3), 1-4.

The following conclusions were arrived at after analysing the returns to a questionnaire from 200 Madhya Pradesh secondary school teachers (64 of them being women): 1) the majority of men teachers belonged to lower middle/middle class families, and the women teachers to upper middle/high class families; 2) most of the men teachers were married and having children, women teachers were single or were having less liabilities; 3) the majority of teachers were of age between 25 and 30 years, half of the women teachers were below 25 years of age; 4) the parents of teachers were not highly educated; 5) the parents of teachers belonged to middle class occupational status. It is suggested that the economic status of teachers should be raised and their working conditions improved.

305 BUCH M B, SANTHANAM M R: Teacher initiation-response nexus in different subject-matter areas. Indian Educational Review 1972, 7(1), 168-76. 4 ref.

This investigation was undertaken to find out the type of association between the 'drill' and 'creative inquiry' patterns in classroom communication episodes in six subject-matter areas: Tamil, English, mathematics, history, geography and science. The sample consisted of 32 upper primary teachers (16 male and 16 female). Flanders' System of Interaction Analysis of ten categories was used for the investigation. Although the association between 'drill' and 'creative inquiry' was not found statistically significant in all subject areas, association was found to be positive in the case of Tamil and History and negative in the case of other four subjects.

306 GARG V P: Teaching of economics in secondary schools. Educational Forum 1971, 16(2), 39-41.

The teaching of economics should be such as to help students make a rational analysis of the economic problems. The following suggestions have been made for economics teachers: 1) providing to students an insight into the chosen topic in the class; 2) relating the subject matter with real-life situations and presenting the matter in accordance with the standard of the class and in keeping with individual differences; 3) treating the subject matter in such a way that it may not be isolated and deprived of its link with other social and pure sciences.

307 NIGAM B K: Involvement of students in teaching of economics. Educational Forum 1971, 16(2), 34-8.

The following techniques have been suggested for effecting student involvement: 1) using the following methods of teaching - questions, project, problem solving, and discussion; 2) adopting certain topics for dramatics and role play; 3) using audio-visual aids; 4) introducing semi-circular seating arrangement and reducing the number of rows to two; 5) giving assignments to students keeping in view their individual differences; 6) organising co-curricular activities; 7) framing examination questions in such a manner that they require application of knowledge, reasoning and thinking; 8) providing good reading material in the school library; 9) offering proper educational and vocational guidance to students.

308 ROY B: Teacher behaviour patterns in teaching different materials. Indian Educational Review 1972, 7(1), 219-26.

The investigation was undertaken to analyse differences in teacher behaviour while teaching different materials, namely, general science, social studies, mathematics, and the languages. Sex is another variable studied. The subjects were 32 male and 11 female middle school teachers. Flanders' Classroom Interaction Schedule was used. The findings reveal that teaching materials as well as sex play a definite role in creating variations in teacher behaviour. Male teachers may teach general science and social studies better than female teachers who may teach mathematics and the languages better than the male teachers. High lecturing, direct influence and lesser student participation were prominent features with the subjects general science and social studies.

309 SUBRAMANIAN R, PALANISAMI M: Study of factors influencing students' preference for the medium of instruction at the P.U.C. level in Madurai colleges in Tamil Nadu. Interdiscipline 1971, 8(1), 1-6.

The sample consisted of 50 Tamil medium and 537 English medium students of pre-university classes. They were contacted by a research team from the Rural Institute, Gandhigram. This study was concerned with two dependent variables, viz., i) choice of English medium and ii) choice of Tamil medium. The independent variables were caste, age, their rural/urban background, marks at the SSLC, parents' occupation, parents' educational status, parents income, etc. The Chi-square was used to test the influence of independent variables on the dependent variables. It is found that the age of the students and the marks they had scored in the SSLC examinations are the linchpins in their decision on the choice of the medium. It is concluded that a vast majority of them are for English medium and they probably may go in for Tamil medium if all the career courses which they prefer are available in the Tamil medium.

TESTS AND MEASUREMENTS

310 AHUJA P: Study into the element of speed and power in a group test of intelligence. Quest in Education 1972, 9(2), 115-19.

An investigation was undertaken to study the element of speed and power in a group test of intelligence. A group test of intelligence devised by the author was administered to 248 pupils (V-VIII classes) of two secondary schools. Pupils were given

the specified time for each sub-test. When the allotted time was over, the pupils were asked to draw a line to indicate the number of items already attempted by them. Then they were given additional time equal to the specified time to complete the test. The range of difficulty value of the 100 items in the test was also studied. The same test was administered to another 93 students (V-VIII classes). They were given the specified time for each sub-test. When the time was over, the papers were collected. The numbers of right and wrong scores, the number of unattempted items were calculated. The results indicated that the test in question is inbetween a speed and a power one. It is concluded that all intellectual performances cannot be measured in the same dimension. Some need to be measured largely in terms of power, others in terms of speed, and still others in terms of a combination of both. Differences in speed are partly due to differences in power.

311 BHATT M C: Adaptation and standardization of the Wechsler Intelligence Scale for Gujarati children. Indian Educational Review 1972, 7(1), 31-52. 16 ref.

Wechsler's Intelligence Scale has been translated, adapted and standardized for Gujarati children. For standardization a sample of 440 children (220 boys and 220 girls) was taken from 12 schools of Ahmedabad City. The split-half and test-retest reliabilities were calculated and the test validated against other standardized tests of intelligence in Gujarati. Factual validation, age-wise and sex-wise inter-test correlations were also determined.

312 CHATTERJI S, MUKERJEE M, CHAKRABORTY S N: Use of wrong score to increase the predictive validity of aptitude tests. Psychological Studies 1972, 17(1), 15-23. 2 ref.

In an objective type test, usually the right scores and the number of omissions are taken into consideration. However, an attempt has been made to explore the possibility of using the wrong scores to improve the predictive validity of objective type test. The sample consisted of three groups of students of Business management in an institution in the years 1965, 1966 and 1967. The admission test battery consisted of five tests: 1) breadth of knowledge, 2) general ability, 3) mathematics, 4) English comprehension, 5) Data interpretation. The purpose of the admission test was to predict the criterion, i.e. the cumulative grade point average obtained by the students at the end of the course. The right scores and the wrong scores were considered and means, standard deviations and intercorrelations were calculated. With the specific criterion used, the predictive ability of the tests could not be increased by considering both right and wrong scores. However, it is observed that there is the possibility of profitably using the wrong scores to predict some other criterion.

313 NARAYANA RAO S, VENKATARAMA REDDY A: Can Raven's Progressive Matrices Test be shortened? Psychological Studies 1972, 17(1), 7-10.

Realizing the practical difficulty involved in finding sufficient time to administer the Raven's Progressive Matrices Test to subjects in schools without seriously interfering with their class work, a procedure to economise on the time required for administering the test was tried out. Random samples of subjects drawn from a number of schools were divided into 9 equal groups and the groups were assigned to the 9 different conditions of testing randomly. The obtained correlations between the performance in two sessions under different conditions of testing were all found to be high when the test was administered as a power test without any time limitations. On the other hand, administering the test with time limitations as a speed test yielded significantly lower correlations when compared to the above. The following conclusions have been drawn: 1) the Raven's Standard Progressive Matrices Test may not be administered as a speed test with time limitations if the results were to be dependable; 2) either the odd - or the even-half of the test could be administered as a power test instead of the full test without any disadvantage; 3) administering half of the test provides a speedy method of assessing subject's mental ability.

314 SHARMA T R: Measuring intelligence through bicycle drawings. Indian Educational Review 1972, 7(1), 1-30. 37 ref.

Discussing the Goodenough's method of measuring children's intelligence through drawing, it is felt that in drawing a man, the element of sex adversely affects the equality of familiarity with the subject. The author has, therefore, endeavoured to construct a draw-a-bicycle test. From preliminary studies on 417 and 673 children, a 75-point scale has been constructed. For standardization, the test was administered to 2863 children (age, 11-16 years) from 30 schools. The test is found to be reliable and valid and can be used as an intelligence test. The method of standardization and calculation of reliability and validity have been described. The scoring scale is given.

315 SUKUMARAN NAIR A: Raven's test given with three time limits - comparative study of the performance of two sexes. Kerala Journal of Education 1971, 3(1,2), 22-5. 7 ref.

The study was undertaken to test the hypothesis that varying the time limits for the progressive matrices test (PMT) would have differential effects on the two sex groups. 180 boys and

girls studying in VIII, IX and X standards of various secondary schools were administered the standard form of PMT with varying time intervals. Analysis of the data did not substantiate the hypothesis. The performance of the two sexes was almost identical and there was no differential effect on the sexes because of varied time limits.

WOMEN'S EDUCATION

316 YWCA OF INDIA. The educated woman in Indian society to-day. Bombay, Tata MacGraw-Hill 1971, 287p. 46 ref.

The Indian YWCA sponsored a planned study on the subject of the educated womanpower of India. This study is divided into two parts. The first part consists of documentation based on available facts in order to obtain a reliable picture of the present status, while in the second part an attempt has been made to consider the position and formulate tentative judgements. The following suggestions have been offered: 1) compilation of fuller information about educated woman; 2) effective influence by the Governments in all aspects of women's education; 3) enlarging area for employment of women primary school teachers; 4) inducement to professionally trained women to go for the profession even after marriage; 5) demarcation of areas of professionals and volunteers in social work; 6) closer coordination of voluntary organisations engaged in similar work; 7) selective training of volunteers; 8) improvement in women's higher education; 9) proper guidance for choice of professional education; 10) crash programme to mobilise women power to reduce illiteracy.

WORKERS' EDUCATION

317 JADHAV B G: Workers education for workers participation in management. Workers Education April 1972, p. 17-20, 22.

Workers participation in industry has been favoured for building up industrial democracy. Increased industrial production is possible through good administration, free from prejudices and through industrial peace which could be preserved by means of trade unionism, collective bargaining, removing the union rivalry and providing acceptable returns

for labour. The ideal concept would be to activate workers' participation in the management and to make worker-directors bring home to the workers the realisation of various managerial problems. However, the worker-director needs to possess certain skills and qualities to participate in the organisation. Thus, the workmen should be trained with a view to produce among themselves the necessary managerial talents. The trade unions should, therefore, educate the working class and train the talented persons to take up greater and problematic responsibilities in the interest of the industry and their own welfare. The workers' education programmes should also be intensified in the right perspective by the Central Board for Workers Education.

List of Periodicals Abstracted

Education Quarterly 1971: V 23, No 3; 1972: V 23, No 4
Educational Forum 1971: V 16, Nos 2-4
Indian Educational Review 1972: V 7, No 1
Indian Journal of Adult Education 1972: V 33, No 4
Indian Journal of Psychology 1967: V 42, No 1-4; 1972: V 47, No 1
Interdiscipline 1971: V 8, No 1
Journal of Educational Research and Extension 1972: V 8, Nos 3,4
Kerala Journal of Education 1971: V 3, Nos 1, 2; 1972: V 4, No 1
Manpower Journal 1972: V 7, No 4
NIE Journal 1971: V 6, Nos 1,2,4
Naya Shikshak (Teacher Today) 1972: V 14, No 3
New Frontiers in Education 1971: V 1, No 3; 1972: V 2, No 1
Psychological Studies 1972: V 7, No 1
Quest in Education 1972: V 9, No 2
Social Action 1972: V 22, Nos 1,2
University News 1972: V 10, No 5
Workers Education 1972: April

Newspapers:

Amrita Bazar Patrika: 14 June 1972
Economic Times: 15 May 1972
Free Press Journal: 8 April 1972
Hindu: 7,20 April; 17,27 May; 2, 14 June 1972
Hindustan Times: 1, 11 April; 5, 9 May; 24 June 1972
Hindustan Times, Sunday World: 16 April 1972
Hitavada: 2, 6, 19 April 1972
Mail: 18 April; 11, 12 May; 21 June 1972
National Herald: 11 April; 3 June 1972
Patriot: 12 April 1972
Searchlight: 9 June 1972
Times of India: 28 April; 17 May 1972
Tribune: 6 May 1972

SPECIAL SECTION

TECHNICAL EDUCATION - II

A27 ABDUR RAHIM: Engineering education in India. Hindustan Times, Sunday World 11 June 1972, p. 7, cols. 1-3. 1400 words.

The need for revision of engineering education within the framework of changing environment has been stressed. Indian students are less mechanically inclined and they accept the prescribed curriculum as best suited to their needs. Lacking in creative ability and possessing a weak theoretical background, the engineering graduates find the employment irrelevant to their education. The faculty members are also primarily theoretically oriented and train pupils to be research scholars. Thus an average student, who is not desirous of pursuing a research career is left in an insecure position. The small scale industries made available to engineers have not progressed due to lack of patronage. The curriculum should therefore be made interesting to average students. The choice of engineering courses should enable pupils to reduce their subject load and train them to concentrate on a few. Project-type courses should be emphasised in theory and practicals from first year onwards. Building devices and systems should be stressed in laboratories. The postgraduate and research courses could be confined to Indian Institutes of Technology. A research institute supported by the university should be attached to engineering departments to aid communication between the industry, research and engineering colleges. These institutes could feed the local industry and provide internship to students. Keeping in view the changing needs of the society, efforts should be made to provide broad-based engineering education.

A28 ALL INDIA BOARD OF TECHNICAL STUDIES IN MANAGEMENT COMMITTEE ON MANAGERIAL PERSONNEL / MUDALIAR COMMITTEE 1964/: Report. New Delhi, the Ministry of Education, 1966. 76p.

The Committee was appointed to assess the requirements of managerial personnel for the country's development programme in the private and public sectors. The recommendations of the Committee include: 1) persuading industry to organise training for the lower cadres of supervisory personnel; 2) starting 3 institutes to provide full-time instruction in foremanship and supervision similar to the one started by Tata Iron and Steel Co.; 3) starting part-time industrial management courses only in centres where industrial development envisaged employment of a large number of managerial personnel; 4) overcoming the shortage of teachers to teach management subjects and industrial psychology in part-time courses by collaborative

arrangements between the Indian Institutes of Management at Ahmedabad and Calcutta, and the National Institute for Training in Industrial Engineering; the two institutes of management should organise regular courses for training of university teachers of management subjects; 5) increasing the intake to 300 during the IV Plan period for general and commercial management courses at the two management institutions; 6) increasing the intake of part-time courses for [illegible] business management, and starting new centres for business management. [illegible]

A29 ALL INDIA COUNCIL FOR TECHNICAL EDUCATION: Proceedings of meetings - third to twentieth, 1949-1966. [illegible] (In Biswas A, Agrawal S. Educational documents since Independence. New Delhi, Academic Publishers, 1971. 198-238).

At the instance of the Central Advisory Board of Education, the All India Council for Technical Education was set up in 1945. The Council has done good work, and the Government has been content to act on the advice tendered by it. A remarkable achievement in the two decades of independence is the phenomenal growth of technical education. Of late improvement of quality and standard has been stressed by the council. The council has pleaded with the States for the implementation of the schemes of improved pay scales for teachers. The council further suggested that no new institutions should be started as long as the existing ones are understaffed. Starting of technical education and training at the secondary level and opening of junior technical schools had been proposed to stop the overcrowding of universities. The council devoted its attention to other aspects of technical education such as cooperation and collaboration between industry and technical institution, the development of an integrated system of science and engineering in which the complementary roles of engineering institutions and research laboratories are clearly identified, the reorganization of polytechnic education, the refurbishment of diploma courses, the design and fabrication of equipment to make technical education self-reliant, the need for encouraging Indian authors to write technical books, etc.

A30 ANAND K K: Analysis of in-company training costs - a case study. Indian Management 1972, 11(2), 15-20.

The present study examines the nature of the training office costs, the cost-per-unit in terms of programmes, trainee days, training days, and how the costs of one year (1969-70) compare with those of the previous one (1968-69) in the case of

Larsen & Toubro Ltd., Bombay. The limitations of the analysis are: 1) costs are not accumulated programme-wise; 2) avoidable expenses may be reflected in a prior year's cost; 3) all kinds of costs connected with the training are not covered. The reduction of costs in 1969-70 due to increase in number of training days and programme participants indicates that scope for cost reduction is considerable. It has been emphasized that cost of comparable intra-company vs. outside programmes should be explicitly considered in training decisions.

A31 ANNUAL CONFERENCE OF THE ASSOCIATION OF PRINCIPALS OF TECHNICAL INSTITUTIONS (INDIA), 24TH, JAMSHEDPUR, 1965. Proceedings. Jamshedpur, Superintendent of training, Tata Iron and Steel Co., Ltd., 1965. iii, 66p.

The report of the conference proceedings comprises the following: 1) welcome address by G. Kumar; 2) inaugural address by Jehangir J. Ghandy; 3) presidential address by G.R. Damodaran; 4) vote of thanks by R.N. Dogra; 5) symposium on closer link between industry and technical institutions; 6) symposium on reorientation of engineering courses in the light of present day requirements; 7) review of the progress towards adoption of metric system in technical education; 8) discussion on "are we producing more engineering graduates than is warranted".

A32 AZAD J L: Technical education (In Uday Shankar, Ahluwalia S P. Development of education in India 1947-1966. Kurukshetra, Kurukshetra University, 1967. 81-96).

A short history of the development of technical education in India has been given. The tremendous progress of technical education in the post-Independence period has been described. The following problems of technical education: a) shortage of teachers, b) wastage in technical institutions, c) lack of practical training, d) rationalization of engineer/technician ratio, e) unemployment amongst the engineers, f) difference in the duration of courses, g) organization of postgraduate courses, h) correspondence courses - have been discussed. It is pointed out that though quantitatively the progress achieved has been quite impressive, there is room for improvement qualitatively.

A33 BANERJEE D: Education and training in refrigeration. Economic Times 10 February 1972, p. 10, cols. 4-8; p. 11, cols. 4, 5. 1800 words.

The trained personnel required for refrigeration industry have been classified as mechanics, technicians, engineers and researchers. The following suggestions have been made regarding their education and training: 1) an organized programme of training for refrigeration mechanics should be taken up by the industries with the assistance of technical schools or institutes on the basis of a comprehensive curriculum drawn up for the purpose; 2) the training of technicians would fall in line more or less with a three-year full-time diploma programme or a four-year (sandwich) diploma programme; it should be strongly industry-oriented with maximum possible assistance from the industry; 3) the specialized training needed for engineers can be imparted either as a post-graduate diploma course in the universities or by the industries with active collaboration with educational institutions for intensive fundamental training in courses like applied thermo-dynamics, heat transfer, fluid mechanics, instrumentation, etc.; 4) bright engineering graduates may be selected by engineering institutes with suitable facilities to impart intensive post-graduate training in basic sciences, mathematics, instrumentation, and refrigeration and air-conditioning; 5) doctoral degree programme could also be provided with a real industrial problem in the project work; 6) specialized "Refrigerating Institutes", more or less on the same lines as that of Leningrad Technological Institute in the USSR may be started on a national basis and located in the areas where refrigeration industry has flourished or is likely to expand.

A34 Blueprint for technical education [News Item]. Patriot 23 April 1972, p. 8, cols. 2, 3. 300 words.

Some of the recommendations put forth by the All India Council for Technical Education at its 21st meeting are: 1) forming statutory boards or councils for technical education in States; 2) granting autonomy to select technical institutes; 3) constituting a joint committee of the All-India Technical Council for Education and the University Grants Commission, which will examine the structure of engineering education and suggest measures; 4) introducing sandwich courses in engineering education in order to meet the needs of industrial development; 5) offering scholarships to 25 per cent students joining polytechnics so as to attract the best talent, and reserving a certain percentage of scholarships to skilled workers; 6) entrusting the Centre with the responsibility to share with States 50 per cent of the expenditure the schemes may entail; 7) linking technical education with management techniques; 8) retraining teachers and starting a course for principals and heads of departments in polytechnics.

A35 Centre proposes new integrated system of technical education. Hindu, May 25, 1968. 1. 450 words.

A new integrated system of technical education at the secondary school stage has been proposed by the Centre. The scheme envisages two points of entry - one at the end of the seventh class and the other at the end of the tenth class. The integrated course will be of five years duration to run concurrently with secondary education but as a distinct and specialised course. The idea is that students completing seventh class and tenth class may be siphoned off into technical education, oriented towards industrial employment. Provision will have to be made for this type of vocational training for two million students, and on the basis of an enrolment of 1,000 students per school, about 2,000 technical schools will be needed by 1986. This scheme will require about 67,000 teachers and it is proposed to train a new cadre of teachers for this purpose at the regional colleges of education of the National Council of Educational Research and Training and other teacher training centres to be set up at selected engineering colleges and polytechnics. The authorities feel that the entire scheme of technical education should be reorganized to correct the inadequacies noticed in the present courses. It has been found that the present diploma courses are not industry-oriented and there is a lot of wastage in polytechnics. A scheme is being worked out to improve the standard and quality of diploma courses.

A36 CHANDRAKANT L S: Research and extension services in technical education (In Adaval S B, Ed. Third Indian Year Book of education, educational research. New Delhi, National Council of Educational Research and Training, 1968. 249-58).

Since 1950, the Central and State governments have spent over 2100 million rupees on technical education and another 2500 million rupees are slated to be spent in the course of the Fourth Five Year Plan period. Hence there is need for research in technical education to ensure that the money spent yields worthwhile results. The objectives of research should be determined in advance and a clear-cut programme of work formulated. The resources necessary, particularly personnel, must be mobilised. The results of research must be carefully evaluated and extended to actual field conditions in technical institutions. A central research organization must be set up to work in close collaboration with technical institutions and industry. It should function as an autonomous academic body. Besides itself carrying out research programmes, it should distribute research problems to selected technical institutions which have the necessary competence. The following are the main areas in which research may be undertaken: 1) curriculum development; 2) examination reform; 3) textbooks and instructional materials; 4) design and manufacture of laboratory equipment; 5) design of buildings for technical institutions; 6) evolving

objective tests for admission. There is also need for a network of extension service centres located in selected engineering colleges and higher technological institutes. The research results should be disseminated through these extension centres. These centres should organise inservice teacher training in the use of the new curriculum, instructional material and audio-visual aids, and discuss the individual problems of teachers. There should be frequent seminars and workshops on specific aspects of technical education.

A37 DATTA M M: Role of Institution of Surveyors (India) in professional education. (In Seminar - Role and problems of professional institutions in a developing economy, New Delhi, 1969. Papers for discussion. Delhi, the Institution of Engineers (India), 1969. 20-9).

The present university education in 'surveying' in the country is limited to being an integral part of the civil engineering course which does not permit adequate time to the teaching and advanced study of the subject. Now the responsibility of imparting professional education in surveying has come on the surveyors themselves. The requirements of professional education in surveying are diverse. In order to achieve short-cuts to this challenging problem, the Institution of Surveyors has proposed the following measures: a) introduction of short courses in surveying in universities and institutions; b) arrangement for correspondence courses by the institution; c) establishment of coaching classes in the regional branches of the institution; d) encouraging writing and publication of technical books covering professional fields such as surveying, conforming to Indian conditions and practice.

A38 Developments in technical education. University News 1972, 10(5), 4, 5.

The All India Council for Technical Education which held its 21st meeting on April 21, 1972 accepted the following recommendations made by a conference of the State Directors of Technical Education: 1) every State should set up a State Board of Technical Education on a statutory basis for a) coordinated development of polytechnic education, b) continuous evaluation of standards, c) holding of examinations and award of diplomas; 2) under the joint auspices of each Board and Regional Committee of the AICTE, there should be a standing Evaluation Committee to inspect the polytechnics and to suggest measures for improvement; 3) this Board should establish close cooperation and coordination with industry so as to train the right type of technicians. Some of the other important decisions are: 1) setting up a committee to take an overall view of the present state of all

private technical institutions in the country; 2) establishing a Central Institute of Printing Technology; 3) extending the duration of the course in Architecture to integrate one year practical training with it; 4) permitting the staff of the Schools of Architecture to undertake consultancy work; 5) providing cent per cent Central grant for a minimum period of ten years to institutions approved by the Board of Management Studies; 6) instituting an expert committee to review and modify the selection procedures in technical institutions and a Joint Committee of the UGC and the AICTE to review the whole system of engineering education at the first degree level.

A39 HEGDE S P: Institutional set up of management education, structural changes in management course. Economic Times 3 June 1972, p. 5, cols. 3-8; 5 June 1972, p. 5, cols. 3-8. 3000 words.

The root cause for the several ills of the management education is the lack of liaison between educational institutions and the local trade and industry. For instance, the lack of practical knowledge of the management degree holders is an outcome of the above-mentioned cause. Hence, close liaison between the business world and educational institutions, both at national level and at regional level, has been suggested. Attaching departments of management to selected [illegible] universities is preferred to opening new autonomous management institutions. At the national level an All-India board of management education, training and research may be set up. The members should be drawn from representatives from national bodies of trade, industry, banking, insurance, etc. At the university level, it is suggested that the head of the department of management should be advised by a board of management in which should be represented the local trade, industry, etc.

A40 How effective is our engineering education? [Editorial]. Indian Chemical Engineer 1971, 13(2), 1, 2.

The two objectives of engineering education are: 1) the dissemination of knowledge with a view to developing the analytical abilities of students, and imparting information and know-how which may be useful currently as well as in the near future. Though the former objective is accepted as the academic objective of education and a source of innovation, the latter seems to be the real need of the present-day India. However, a curriculum based entirely on practical and job-oriented objectives is currently considered inferior and suitable only for subordinate manpower. If it is agreed that these two objectives are to underline planning of programmes for engineering

education, their effect on curricular and administrative structure should also be conceded. It has to be understood that admission to engineering colleges on the basis of school final examination results does not ensure the required level of academic competence. It is argued that students who have attained the required level of achievement should be admitted to engineering colleges even if they have not completed the school career. The rigidly disciplined curriculum at the undergraduate level does not promote excellence. It is suggested that there should be plenty of freedom of choice to select courses even at the undergraduate level. With proper guidance Indian students are capable of making right choice.

A41 HUSAIN S K: Professional education and professional institutions (In Seminar - Role and problems of professional institutions in a developing economy, New Delhi, 1969. Papers for discussion. Delhi, the Institution of Engineers (India), 1969. 53-68).

The first task of professional engineering institutions is to devote their attention on technical education in the country. The professional institutions should conduct postgraduate examinations and active research instead of merely holding examinations for undergraduate courses. There should be close liaison between professional and technical institutions and the industry. There is need for adoption of international and national standards in professional education, production of technical literature, etc. The role of the institutions, specially in developing economies, in respect of professional education, training of technical and professional manpower, developing and utilizing research and inventive talents, encouraging consultancy service, etc. has been described. The results of a survey of a few professional institutions in various countries which was undertaken by the author to get information on the role and influence of professional institutions on the educational system have also been given.

A42 INDIA. PLANNING COMMISSION. EDUCATION DIVISION. Factual survey of junior technical schools. New Delhi, the Commission, 1964. 43p.

The objectives of establishing junior technical schools are for enabling the students who complete this course to join a polytechnic for higher technical education or to join an industry as apprentices. By 1960-61 there were 39 schools. However there were certain deficiencies and practical difficulties in the implementation of this programme. Hence, a questionnaire survey was conducted among the already existing 39 schools. The findings of the survey are as follows: 1) out of the 39 schools, 22 had an annual admission capacity of 41-60 students; 2) out of the 5451 students admitted,

the number of students who secured marks between 40% and 60% in the qualifying examinations for admission were 2795 (51%) and the number who scored less than 40% marks was 2048 (38%); 3) out of the 3221 students admitted only 1141 came out successful which means a wastage of 64.5%; 4) out of the 515 students who passed out of the junior technical schools, 250 (49%) joined industries while another 233 (45%) joined polytechnics; 5) there were considerable variations in the implementation of the scheme in the States with particular reference to the pattern of admissions, utilization of facilities, factors of wastage and the objectives of the courses vis-a-vis the trends of post-educational activities of the students.

A43 INDIA. SECONDARY EDUCATION COMMISSION (1952-53). Summary of recommendations, technical education (In its Report, Delhi, Manager of Publications, 1965. 186-7).

The following recommendations have been made: 1) technical schools should be started in large numbers either separately or as part of multi-purpose schools; 2) Central Technical Institutes should be established in larger cities which may cater for the needs of several local schools; 3) technical schools should be located in close proximity to appropriate industries and they should function in close cooperation with the industry concerned; 4) it should be obligatory on the part of industries to provide facilities to students for apprenticeship; 5) in the planning of technical education at all levels, representatives of commerce and industry should be closely associated with the educationists; 6) 'industrial education cess' should be levied on industries and the proceeds should be used for the furtherance of technical education; 7) the help of the All-India Council for Technical Education should be taken in evolving a suitable pattern of technical courses at the secondary stage.

A44 INSTITUTE OF APPLIED MANPOWER RESEARCH, NEW DELHI. First report on engineering manpower survey, coordination of university education in engineering with employment of graduate engineers. New Delhi, the Institute, 1965. ix, 41p. 14p. 95p. 26p. 17p. 22p. 8p.

The proposed recommendations are limited to the Indian Institutes of Technology and the Regional Engineering colleges. The main aim is to organize the supply, distribution and use of engineering manpower as a cooperatively planned process. The specific proposals with regard to IITs concern the following aspects: 1) new types of courses at undergraduate level; 2) admission capacity; 3) eligibility for admission to the new higher technological degree courses; 4) machinery and procedure for admission; 5) objectives and duration of the new higher technological degree courses; 6) machinery and procedure for developing course contents; 7) composition of the training and placement committee; 8) settlement and allocation of practical

training quotas; 9) tuition fees, grants and stipends; 10) service undertaking; 11) review of current machinery and procedure for recruitment and training of graduate engineers by the various technological employment agencies; 12) open opportunities at the ITIs for awards of B.Tec (Hons.). Specific proposals have also been made with regard to Regional Engineering Colleges on the same aspects as listed above. The two IAMR papers - a) curricular pattern of university education in engineering/technology, b) planned encadrement of professional engineers and engineering technicians are appended. Appendix III is the summary of opinions expressed by eminent engineering educationists and professional engineers regarding the recommendations.

A45 INSTITUTE OF APPLIED MANPOWER RESEARCH, NEW DELHI: Second report on engineering manpower survey, demand and supply of engineering manpower 1961-1975. New Delhi, the Institute, 1965. iv, 92p.

The process of expansion of the intake capacity of engineering educational institutions has reached a stage at which a dynamic balance between supply and demand has been reached in the quantitative sense. Now it is important to establish a dynamic balance in the qualitative sense. To this end, this report recommends that the intake capacity attained in the current year should remain stable for a brief period of two years in the case of engineering colleges and three years in the case of polytechnics. Therefore the process of expansion of intake capacity should be resumed under strict control subject to an annual ceiling of 1500 additional seats for engineering colleges and 3000 additional seats for polytechnics. The purposes to be secured through reform of the curricular pattern of engineering education and the nature of the reforms required may be broadly described as consisting in the progressive changeover from the existing standard pattern to the cooperative pattern as well as to the extension pattern of engineering education. It is recommended that practical steps should be commenced without delay so that the process of planned changeover may be put into full working order before the end of the Fourth Plan period. The need for an organised system for the supply of information about the employment of engineering manpower in the country is underlined.

A46 MAHESHWARI S: Training in public administration in India. Indian Journal of Public Administration 1971, 17(4), 617-33.

The genesis of training courses on techniques of administrative improvement for the civil servants and the broad range of courses available in the country have been discussed. The role played by the Indian Institute of Public Administration has been detailed.

The following observations have been made: 1) the significance of management, and hence training for it, in the execution of Plans is realised by the Government; 2) there is a trend towards diversification of themes in the training courses, which on close scrutiny, is found to be less than genuine; 3) the training courses are not always planned in a realistic way to deal with the live problems and issues currently faced by the administrators attending it; 4) there is need for training for the top level civil servants and the lowest level personnel of the bureaucracy (clerk, inspector, ticket-collector); 5) participants for the training are chosen by the sponsoring organizations not on the basis of felt need but on the basis of who can be spared for the training; 6) there is absence of a regular follow-up of the trainees after the course; 7) training is not yet regarded by the Government as a part of long-range planning of public personnel; 8) when the Government wants to set up a training school, it should tap and use the facilities already available in the universities and other institutions; 9) universities and colleges should provide for teaching of public administration in a big way; 10) the legislators and ministers also need training through seminars, conferences, etc.

A47 MATHUR S G: Can professional institutions effectively help in-plant or in-field education (In Seminar - Role and problems of professional institutions in a developing economy, New Delhi, 1969. Papers for discussion. Delhi, the Institution of Engineers (India), 1969. 78-82).

The education given in engineering colleges and polytechnics is very much divorced from the practical requirements of the industrial employer. In-plant training is important in this regard. It can be given in the factory or workshop itself. In-plant training should aim at achieving: a) development of practical skills in technical/process/management areas; b) development of practically-oriented technical knowledge. In-plant training should be properly coordinated by a single agency instead of the present practice of several agencies handling it. For effective supervision of in-plant training, there should be a coordinated agency with regional centres and having chartered engineers of a professional institution or well qualified engineers. The Institution of Engineers (India) can enrol students who want to have their in-plant training properly supervised. The training should preferably be controlled by a National Training Council.

A48 NANDI S K: Reorientation of technical education. Indian Chemical Engineer 1968, 10(1), 2,3.

It is felt that there should be stress on research and reorganisation of the system of technical education to stop import of plants and technical know-how. The technical education needs a reorientation on the following lines: 1) for the first four years of the course factory training should be made compulsory for all engineering students for six weeks during summer vacation. At the end of the first year, students must work in a factory for one year and get a stipend of Rs.350 p.m. Thus they will have 18 months' industrial experience on completion of the course; 2) industries must provide facilities like boarding and lodging for the training of the students by deputing technical personnel for proper supervision of the trainees; 3) laboratory work should be planned in such a manner, that the engineering students get the facility of constructing equipment; 4) research work for M.Tech. and Ph.D. degrees should be conducted at the industries under the guidance of the university teachers; 5) national laboratories must devote their activities towards solving industrial problems, for instance, construction of television sets, computers etc; 6) Government should send a list of all the materials imported in the country to every teaching or research centre; 7) after completing a project, research workers should get a certain percentage of the profit that will accrue after industrial exploitation of the project. For successful implementation of these objectives, teachers must be given proper status and salary, the retirement age must be increased, because it is their endeavour which contributes towards the prosperity of the country.

A49 New ideas for technical education [Editorial]. Hindu 25 April 1972, p. 6, col. 2. 400 words.

The new proposals made by Tamil Nadu Technical Education Board are as follows: 1) introducing new subjects such as marine engineering, nautical architecture, nuclear engineering and design and automotive engineering in Guindy Engineering College; 2) installing a testing centre for automobile components in Madras and a testing laboratory for all forms of instruments at Coimbatore for giving students a practical orientation; 3) establishing a technological university with head quarters at Guindy College and affiliating six other institutions in the State; 4) introducing aeronautics, plastic and rubber technology and dairy engineering, prosthetics, pharmacy, data processing and diesel traction subjects in polytechnics; 5) conducting sandwich courses in textile technology; 6) setting up a board consisting of industrialists and educationists to plan new courses and to study the problems of training engineers for specific careers. The Central Government is encouraging reorientation of technical education and is financing the Institutes of Technology and the Regional Colleges of Engineering. As the States have realised the difficulty of financing higher education, the Centre should estimate numbers and types of engineering personnel needed for the planned development of the country and promote technical education.

A50 PENDSE S G: Technical training (In Adaval S B Ed. Third Indian Year book of education - educational research. Delhi, National Council of Educational Research and Training, 1968. 259-65).

The present patterns of technical training existing in the country have been described. They are: 1) the Industrial Training Institutes (ITI) which provide training in 29 engineering and 22 non-engineering trades; 2) the Central Training Institutes which train craft teachers needed for ITIs; 3) the scheme of apprenticeship training under the Apprentices Act 1961; 4) the scheme of part-time classes for industrial workers organised in selected institutes and factory premises; 5) the National Council for Training in Vocational Trades which advises the Central Government on training policy, prescription of syllabi, duration of courses, methods of training etc.; 6) training programmes for supervisory personnel in industry taken up by the Director General of Employment and Training in collaboration with the National Productivity Council and the Chief Advisor of Factories. The future development of the training programmes, it is suggested, have to be considered under three aspects: 1) consolidation mainly to be accomplished by improving the quality of instructional staff at all levels; 2) expansion by increasing the training capacity of existing ITIs or by opening new ones; 3) diversification of the existing training programmes. There is need for research in the development and use of teaching aids, teaching methods and techniques, and construction of reliable selection tests.

A51 PHILIP J: General management executive development programme. ISTD Review 1971, 1(6), 7-10.

The short range objective of management development programme is to raise the level of executive performance on the present job, and the long range objective deals with the preparation of those with recognised potential for future advancement. While many incompany programmes emphasise on the short term objective, most of the outside programmes reverse the order of emphasis. A good executive development programme should aim at developing in the participant the managerial skills and provide a generalist's view of things. Decision making, human relations, communication and community relations are the skills of vital importance. He should also be equipped to face the challenges and dangers of tomorrow - increasing competition, galloping technology; systemisation, computer application and social, economic and political changes. Several problems that weaken the effectiveness of an executive-programme are: poor planning, poor programme design, poor techniques, poor selection, unhealthy environment, unconcerned top management, inadequate trainers. Although formal development plays a very important role, it is subordinate to that of on-the-job development.

A52 RAI B K: Communication between industry, the professional institution and the teaching institution. (In Seminar - Role and problems of professional institutions in a developing economy, New Delhi, 1969. Papers for discussion. Delhi, the Institution of Engineers (India), 1969. 83-8).

In the context of the unbalanced growth of technical institutions, problems of industry, limitations of resources, etc. there is urgent need in developing countries for a reappraisal of the objectives of professional and technical institutions, and for closer collaboration between professional institutions, universities and the industry. The efforts of professional institutions generally end at holding seminars and symposia which are highly academic and unrelated to the topics which deserve deep attention for society's benefit. The following suggestions are given for professional institutions: 1) associating themselves with the rewriting of textbooks at school and college levels to encourage interest in engineering sciences; 2) organizing popular hobbies such as radio making, model making etc.; instituting prizes for the meritorious students at various levels of education; 3) promoting scientific and technical popular magazines; 4) providing guidance to students and engineers; 5) arranging for students, conducted visits to factories; 6) playing a liaison role in bringing together industry and the research talent in engineering colleges to make the research efforts of engineering institutions more pragmatic and useful; 7) providing technical and recruitment consultancy to industry.

A53 ROY T K: Chemical engineering education and role of the Institution of Chemical Engineers (In Seminar - Role and problems of professional institutions in a developing economy, New Delhi, 1969. Papers for discussion. Delhi, the Institution of Engineers (India), 1969. 101-6).

Industrial leaders opine that academic institutions have become so preoccupied with science-oriented research and teaching that they are not training engineers for practice. However, some believe that such a training in fundamentals prepares the engineers to cope with problems which the industry will face one or two decades later. But the engineering departments of universities cannot be indifferent to the real needs of industry. There has to be a blending between science-oriented training and engineering-practice-oriented training. Professional engineering societies can help a great deal in promoting the mutual interests of universities and industrial organizations by: 1) creating opportunities for members of engineering faculty to take up industrial consultancy; 2) sending students to practise schools in industrial establishments; 3) replacing routine laboratory or workshop experiments as much as possible by group project work; 4) professional societies themselves organizing design competitions among the university departments.

A54 RUDRABASAVARAJ M N: Executive development system. ISTD Review 1971, 1(6), 11-15. 12 ref.

The several points that are relevant to the need and the problem of executive development have been mentioned. Some of the major objectives of management development are: 1) to assure managers in required numbers and with the required skills to meet the anticipated future needs of business; 2) to encourage managers to grow as persons and in their capacity to handle greater responsibility; 3) to improve their performance at all levels in the jobs they now hold; 4) to sustain good performance throughout their careers. The executive development programme is not merely a programme. It is a system with closely interrelated phases of activities involving three sets of characters - the company, the executive and the school. The roles of these three characters have been discussed.

A55 SEMINAR ON COLLABORATION BETWEEN INDUSTRIES AND TECHNICAL INSTITUTIONS, FIRST, BOMBAY, MARCH 1964: Vol. 1. Proceedings, Vol. 2. Papers presented. New Delhi, Institute of Applied Manpower Research, 1964. ii, 107p; iii, 93p.

The Institute of Applied Manpower Research undertook in cooperation with the All-India Council of Technical Education to convene a series of seminars of which the first was held at Bombay in March 1964. The results of the seminar were helpful in finalising and implementing the first scheme of collaboration between the public sector steel industry and the engineering educational institutions. The attention was directed mainly to engineering education at degree level. In all, 22 papers were presented. The subject matter of the various papers could be grouped under the following headings: 1) training of engineers for industry; 2) exchange of technical personnel between industrial organizations and technical institutions; 3) orientation of curriculum of instruction for improved utilization of engineering manpower; 4) organization of engineering training in other countries; 5) selection and placement of engineering personnel; 6) training of technicians. Volume 2 consists of all the papers presented.

A56 SEMINAR ON COLLABORATION BETWEEN INDUSTRIES AND TECHNICAL INSTITUTIONS, SECOND, MADRAS, JUNE 1964: Vol 1. - Summary record of proceedings, Vol. 2 - Verbatim record of proceedings. New Delhi, Institute of Applied Manpower Research, 1964/1965. iii, 40p., iii, 117p.

The Institute of Applied Manpower Research with the cooperation of All-India Council for Technical Education undertook to convene a series of seminars, of which this one was the second, to bring

about a closer coordination between engineering education and employment of engineering manpower. The attention was focussed on education at diploma level. Some of the important recommendations are as follows: 1) sandwich scheme is the best method of training technicians at diploma level; more polytechnics should be created near a concentration of industry; 2) there is need to start a two-year matric craftsmen course; the junior technical schools which have come up in the South should provide candidates for the polytechnic courses; 3) it may be useful to continue the existing three-year course with two years of apprenticeship and rearrange the same as 'Five Year Course'; the training facilities should be properly supervised by supervisors in the industry and a placement officer in each educational institution; 4) the existing special emergency 'two-year course' may be dropped; 5) with regard to the suggestion of bifurcated degree course, it is felt that while attempts are made to develop electives in duo course, which may cater to requirements of a large group of industries, this step has to be taken in stages, after each group of industries spelt out the number and specific fields of technology in which orientation was desired. The other recommendations relate to a) introduction of part-time evening course, b) problem of staffing, c) revision in the new model syllabus, d) advancement of talented diploma holders, e) four-year integrated course, etc.

A57 SHARMA A: Available technical potential at the delta level. Indian Educational Review 1971, 6(2), 182-95.

A study was undertaken to assess the supply of technical potential at the delta level (class VIII) in the boys' higher secondary schools of Delhi. Other aims were to study the effect of urban and rural environments on the development of technical potential, to determine the loss of this potential through failure to secure technical education and to diagnose the causes of this loss with a view to remedying them. A battery of mechanical aptitude tests consisting of the i) mechanical knowledge test, ii) mechanical comprehension test, iii) space relations test, iv) form relations test, and v) mechanical adaptability test, was used for conducting the survey. The sample consisted of 1093 students of whom 934 belonged to urban area and 159 to rural area. A major finding is that only 14.55% students are potential material for higher technical education and subsequent technical jobs. The rural contribution is 1.10% in comparison to the urban contribution of 13.45%. It is suggested that, among other things, simple machines, their principles and functions may be taught at the delta level.

A58 SINGH R P: Professional education in ancient and medieval India. Delhi, Arya Book Depot, 1970. iii, 146p.

The book is divided into two sections, the first dealing with the ancient period and the second with the medieval period. In both the periods, professional education such as for priesthood, teaching, medicine, law, architecture and engineering, and vocational education for trades and crafts have been dealt with.

A59 SRIVASTAVA S: Interdisciplinary approach in professional education. NIE Journal 1971, 6(2), 1-5.

The need for an integral approach in professional education has been realized on learning that 1) a better educated man can do any job better than the less educated one; 2) no educational system can function in a vacuum; 3) the knowledge explosion has changed the past-oriented systems into future - oriented systems; 4) professional education is an applied field. The following four-phased professional training programme has been suggested: 1) a good grounding in general education; 2) a deep study of the Sciences - both Social and Natural as Physics, Chemistry, Biology, Neurology, etc., as the case may be; 3) a study as to how this knowledge of the Arts and Sciences is applicable to one's profession; 4) a good grounding in the history and development of his own professional field and in group dynamics and psychology of motivation which will prepare him to take the leadership role upon himself.